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—B. C., Tredegar, S. Wales.

Extract from "Everybody's Fortune Book," 1931.



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AS HEALER

One lady writes: "My sister suffered very badly for years, but since I gave her a Joan the Wad to keep near her she is much easier. Do you think this is due to Joan or the Water from the Lucky Well?"

AS LUCK BRINGER

Another writes: "Since the War my wife and I have been dogged by persistent ill-luck, and we seemed to be sinking lower and lower. One day someone sent us a Joan the Wad. We have never found out who it was, but, coincidence if you like, within a week I got a much better job and my wife had some money left her. Since then we have never looked back and, needless to say, swear by 'Queen Joan.'"

AS MATCHMAKER

A young girl wrote and informed me that she had scores of boy friends, but it was not until she had visited Cornwall and taken Joan back with her that she met the boy of her dreams, and as they got better acquainted she discovered he also has "Joan the Wad."

AS PRIZEWINNER

A young man wrote us only last week: "For two years I entered competitions without luck, but since getting Joan the Wad I have frequently been successful, although I have not won a big prize, but I know that —, who won £2,000 in a competition, has one because I gave it him. When he won his £2,000 he gave me £100 for myself, so you see I have cause to bless 'Queen Joan.'"

AS SPECULATOR

A man writes: "I had some shares that for several years I couldn't give away. They were 1/- shares, and all of a sudden they went up in the market to 7/9. I happened to be staring at Joan the Wad. Pure imagination, you may say, but I thought I saw her wink approvingly. I sold out, reinvested the money at greater profit and have prospered ever since."

All you have to do is to send a 1/- stamp and a stamped addressed envelope for the history to:

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**SEVEN TO
THE
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SEVEN TO THE MOON

by

Lee Stanton

No.

5

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Letters to the Editor . . .

ATMOSPHERE

Is Earth the only planet with an atmosphere? If other planets have atmospheres, would they support life? What kind of life?

K.H. (London, S.W.2.)

Mercury probably has no atmosphere, though the problem hasn't been settled yet. Venus has an atmosphere consisting mainly of carbon dioxide and formaldehyde. A "thin" atmosphere about 60 miles deep surrounds Mars; it contains water and carbon dioxide.

Jupiter, Saturn and Uranus atmospheres are very deep and consist of hydrogen, methane and ammonia. Neptune and Pluto have atmospheres like the Giants, but with more methane and less ammonia.

These "airs" could not support animal life as we know it. However, several terrestrial fungi are able to live in such media, and there is no reason why these should not be highly developed and intelligent.

But why should life remain in contact with the atmosphere? Jupiter's surface consists of ice, thousands of miles deep. This could house a teeming population. Have you read Spencer Jones' "Life on Other Worlds?"



ATOMIC FISSION

I am told that chemical fuels are not efficient enough to get a rocket-ship out of Earth's

gravitational field. Then why not use an atomic fission "motor"? Surely a controlled blast sent through a suitable jet would lift it fast enough?

G.B. (London, N.W.6.)

Take a space ship with an automotor producing an exhaust velocity about a thousand times greater than an oxygen-alcohol mixture. The fuel would weigh only a few pounds instead of tons and the mass-ratio would be nice and low.

But the rate at which energy is produced at the jet would raise the temperature so much that the ship would vaporise within seconds.

Even if this were not so (look in Interplanetary Flight by A. C. Clarke for mathematical proof), there is grave danger in letting space ships belch radio-active clouds all over the place.

The answer seems to be the use of atomic fission to force out some harmless material like steam, keeping the fission side of things inside the ship.



LIGHT

But for the fortunate chance that our eyes are sensitive to light rays we should never have observed the stars. How would we have known that other worlds existed?

C.T.C. (Taunton)

If our eyes were not sensitive to light, there's a good deal more than stars we should not have

continued . . .

observed ! Our eyesight is not a fortunate chance. Eyes evolved as they did so that they would be sensitive to the dominant radiations around us. If the dominant radiations had been, say, radar waves, we should have developed eyes to see them, and called them "light."

PLANETS

Are there any planets outside the solar system, or only stars ? Could they be inhabited ?

S.C.W. (Middleborough)

According to a U.S. Air Force report, there are 22 stars possessing satellite planets, and each one of these could have at least one ideally habitable planet.

"But some astronomers, notably Dr. C. F. von Weizacher of Chicago, believe that there are billions of stars with planets. The same Air Force report states that "the chance of space-travellers existing at planets attached to neighbouring stars . . . can be viewed as almost a certainty."

LIGHT

I keep reading stories in which space-ships travel faster than light. Isn't this sheerly impossible ?

J.F.T. (Nottingham)

No. Einstein claimed that the velocity of light set a limit for the motion of energy and matter

because relativity would fall to pieces without that assumption. Rational physics will not allow that an event seen from one position as a cause should be seen elsewhere as the result of a latter event.

The operative word is *seen*.

Einstein naturally based his theories on available experimental data. Future discoveries may well allow us to observe things by means of some natural phenomenon that exceeds the velocity of light. The velocity of that new medium will then become the limit. And so on.

KEPLERIAN

Can the path of a rocket to, say, the Moon be described geometrically ?

P.K. (Bradford)

Not exactly. Look at it this way. A trans-continental rocket travels along part of a Keplerian ellipse (the rest of the ellipse lying inside the earth). A Moon-rocket would have a much higher apogee — so high that it would lie inside the Moon's gravity field.

So the rocket would curve upwards along the side of an ellipse until it reached the neutral point where Earth and Moon gravities are equal and opposite. It would then curve down towards the Moon along the side of a reversed ellipse.

The total path is rather like a drawn-out "S."

operation fantast

It has passed from being a cult, it is now a disease, this enthusiasm among devotees of science fiction. SF fans differ from readers of all other types of fiction (so far as we know) in that they "herd."

As an example, take the Anglo-American organisation known as *Operation Fantast*.

It is a voluntary organisation devoted to increasing public interest in all types of science fiction. It has its own quarterly magazine, but its principal function is in circulating SF literature among its members. It is a postal library, and for the astonishingly small subscription of 2/6d. per month (plus postage) subscribers can obtain as many SF magazines and books as they can read. That's value, to-day.

Operation Fantast also buys and sells used SF publications, and it is able to accept orders for hard-to-get American magazines. The London branch of the organisation meets every Thursday evening in the White Horse, Fetter Lane. Everyone is welcome. SF fans recognise each other from more earthly patrons by a common far-away look in the eyes and a tendency towards duffle coats.

Mainspring is Captain K. F. Slater; address currently, 13 G.P., R.P.C., B.A.O.R. 15.

Library enquiries should go to Michael Tealby, 8 Burfield Avenue, Loughborough, Leics.

To more domestic matters — ourselves. You know that we want to provide science fiction enthusiasts in Britain with the best science fiction. We can do that only if enthusiasts themselves get down to it and start to write . . . we feel sure that there are better fish in the sea than ever came out of it, and among SF enthusiasts we must have an untouched potential of first-class imaginative writers.

We refuse, in any event, to believe that only in America are there writers of calibre in SF literature. In this country are people just as imaginative, just as capable of writing first-class science fiction. The one condition required is an opening for the stories.

That opening is provided in *Science Fiction Fortnightly*. More, as an encouragement to new writers to try their hands, we are prepared to commission books on the strength of a synopsis and first chapter submitted. If you feel that you have it in you, send in the first three thousand words and an outline of the plot to follow.

We look forward to the discovery of a constellation of new stars with this announcement.

— EDITOR

SEVEN TO THE MOON

by

LEE STANTON

CHAPTER ONE

KIMPIE

"Those space suits sure build you up, don't they? Anybody seein' you now, Kimpie, would think you had a torso like the ginks in the muscle-trainin' ads."

The man at the bench turned round ponderously in his weighted boots. The grey rubberised fabric of the suit certainly masked his shape effectively, but to judge by the small, pear-shaped head that emerged from the neck opening, he was no superman. His skin was pale and sallow, his hair thin and wispy, and his ears looked like an absent-minded sculptor's first attempt.

You might have written K. Arthur Kimpie off as completely negligible but for two features, his brow and his eyes. He had the lofty bony brow that distinguishes some types of genius and some types of moron. His eyes were a queer indeterminate grey-green, and when he was riled they widened into a fixed stare. He was riled now.

"You're late, Jud. I've been waiting to start testing this suit for the past twenty minutes. You know these helmets can't be fixed single-handed."

"I was delayed. I had a job to do for Mr. Dury, and when the big star wants something done, well, I guess the stand-in just has to wait his turn."

"Now, see here . . ."

Then Kimpie remembered his dignity. A physicist, even though he might be only a very minor member of the staff of the I.I.S. moon-rocket project, didn't bandy words with a laboratory attendant.

"If I have any more of your insolence, I'll report you to the Director," he snapped. "Help me on with my helmet."

"Okay, Mr. B. Sc.," grunted Jud, putting the helmet over Kimpie's head as if he was snuffing out a candle.

Until the leads to the two-way talkie set on Kimpie's chest were connected up he was deaf to what went on outside. Jud improved the opportunity by talking about "dese guys wid a coupla letters after deir names who've got the idea they know it all". He lapsed into silence when he plugged the leads in.

"One, two, three, four," intoned Kimpie. "Do you hear me well?"

"Too well," answered Jud.

Kimpie didn't answer. He picked up his record charts and signalled to Jud to open the door of the air-lock between the lab and the inner room. The attendant closed the door after Kimpie, pressed the sealing strip into place and then exhausted the air from the little cubicle. Kimpie pushed open the inner door and entered the vacuum chamber.

Jud climbed up on to a balcony. He slumped on to a high stool, lit a cigarette, and settled down to watch Kimpie through the long window which overlooked the vacuum chamber. It wasn't likely that anything would go wrong with the space suit, but Jud's orders were to keep Kimpie under observation.

It was a boring job. Kimpie plodded up and down steadily, now and again breaking into a jog-trot. At intervals he would record his pulse-beat on the chart. Jud was glad when somebody dropped on to the stool next to him. When he saw that his neighbour was Lee Dury, he grinned with pleasure.

"'lo, Mr. Dury. Come up to see the show?"

Lee Dury accepted the cigarette Jud offered, but he did not take up the conversational opening. He was a barrel-chested, long-legged young fellow. Where Jud slumped on his stool, Lee Dury sat on his.

He looked down thoughtfully at Kimpie, while Jud waited for him to speak. To the attendant, the fact that Lee was a former All-America quarter-back was a far greater

claim to the world's esteem than that, out of thousands of applicants who had been sifted technically, physically and psychologically, he had been chosen as pilot of the first man-controlled rocket to fly to the moon.

Maybe, like many other folk around the International Interplanetary Society's headquarters at Freestone, N.Y., Jud had seen too much of the rocket — *M.C.R. One*. When you live next door to a miracle, you get to take it for granted.

"These scientists are wonderful people," said Lee Dury suddenly.

"Kimpie, you mean," grinned Jud.

Lee didn't respond to the grin.

"Kimpie fits into the pattern, I guess. What I mean is this. Here we are all fixed for the first reconnaissance trip to the moon. All the world outside is getting pretty steamed up about the business — but not the scientists. They are planning and testing for a trip that might not take place for ten years."

"You mean the trip with *M.C.R. Three*," nodded Jud. "The rocket that is actually going to touch down on the moon's surface. That sure will be something."

"And Kimpie down there is doing a pretty important job of work," said Lee, sliding off his stool. "Just remember that, Jud."

"I'll try, Mr. Dury," promised the attendant. "But Kimpie is so all-fired set up with his own importance. It just creases me up."

The phone rang down in the laboratory. Jud ran down to take the call while Lee Dury leaned against the window watching the queer figure in the space suit lumbering about in the airless room.

"You can't speak to him now," he heard Jud saying. "Just as soon as he's free I'll have him ring you. Just a moment, I'll write that number down. . . No, I won't forget."

When he returned to the balcony, Lee looked at his watch.

" You'll be going down soon to meet that Barnway guy, I reckon ? " said Jud. " He sounded pretty much of a hick during the television interview last week."

" Judgment reserved," grunted Dury. " Hullo, Mr. Kimpie is coming out."

Kimpie's spell of testing was up. When he came out through the airlock and saw Dury he signed to Jud to help him off with his helmet, at the same time telling the pilot not to go for a minute. Kimpie's face, slightly red and sweaty, emerged from the helmet.

" I haven't seen you in several weeks, Lee, " he said. " Where have you been hiding ? "

" I've been around, " grinned the pilot. " Briefing meetings and final check-ups — that kind of thing. Be nice to get off into space and enjoy a breather."

" And I suppose before long you'll be going down to the depot to meet this Eb Barnway ? " panted Kimpie, as he dragged off the suit. " That's a positive scandal ! "

" What's scandalous about Barnway ? " asked Lee. " He seemed a pretty respectable citizen when he said his piece for television last Friday."

" I mean it's a scandal that one of the seven places on this — this epoch-making flight to the moon — should be allotted to an uneducated farm-hand from Iowa. Just because his name came out of the ballot-drum. What use is he going to be, just tell me that ? "

" Well, you know the set-up for this flight, " grunted Lee. " There can only be seven people in the rocket, and I.I.S. have worked it this way. One pilot, two scientists — one of whom doubles with me as pilot — two engineers, one journalist, and . . . "

" . . . one hick from the corn-belt, " Jud put in.

" You see, the Society decided that with so many applications for places on the trip, the only fair way was to ballot for the vacant place, " said Lee. " They'd always planned that the seventh place should go to an ordinary guy — kind of representative of Mr. Everyman."

Kimpie's eyes flashed green. There was a whole lot he could have said, but Lee Dury topped six feet two and he had an awkward streak of loyalty in his make-up. Kimpie swallowed his words and asked Jud sourly if they could all share the joke. For the attendant was smiling to himself.

"I was just thinking about that passenger-list for the rocket," he murmured. "Five guys and two women."

And, for comment, he added a whistle. Lee Dury slung a playful right which he allowed to graze Jud's ear. The attendant dodged back.

"I guess you'll be safe with Mrs. Pennant," he said. "She can give you about twenty years, and anyway she ain't interested in men."

"Helen Pennant is the finest astro-physicist at this Centre," said Lee. "That's the reason she will be in the rocket."

"Yeah, but what about that New York newspaper-girl, Carol Friar?" asked Jud. "You weren't here when she came to meet the Director, were you, Mr. Dury?"

"I wasn't. Did I miss something?"

"She was neat, I'll tell you."

And Jud would have been quite happy to tell, but his audience faded out on him. Kimpie had gone off with an expression of distaste on his sallow face. Lee ran downstairs, throwing back a promise to try to get Carol Friar's phone number for Jud while they were on the moon-trip.

"Hey, Mr. Kimpie!" yelled Jud, dragging a piece of paper out of his jacket pocket. "I nearly forgot. This geezer wants you to call him. Said it was urgent."

Kimpie took the scrap of paper. The name on it, "Warner Leming," meant nothing to him, but he dialled the number given. Almost at once a man's voice, a soft-spoken voice, answered.

"Why, hullo, Mr. Kimpie," the voice said when Kimpie announced himself. "It was good of you to call me up. I was wondering whether you could spare the time this evening

to come over and see me at my house — on a matter of business."

"Well, I don't know about that," stalled Kimpie. "I'm engaged for part of the evening."

"I can imagine that your time is pretty well occupied," said the smooth voice. "But I think the subject I want to discuss — which I can't mention over the phone — is likely to interest you. I think you and I, Mr. Kimpie, can be of considerable help to each other, and you will not find me ungrateful."

Kimpie lived, more than most men, in his own private world. He wasn't greatly interested in anything in the world outside, particularly if it did not affect the welfare of K. Arthur Kimpie. But this phone message from the unknown Mr. Leming touched his curiosity.

"I'll be over about eight o'clock," he said. "I have to attend a meeting first. Where's your house?"

"At Gable Ends, about three miles out of Freestone on the Albany road," came the answer. "I'll be looking for you about eight, then. Good-bye, Mr. Kimpie."

Kimpie hung up, collected his towel from the locker outside and went off for a shower. When he had dressed and slicked down his thin hair, he left the laboratory buildings. He wrinkled his eyes against the sunshine, and almost of their own accord his feet gravitated towards a kind of compound which had been built well away from the rest of the Centre's buildings.

The compound was ringed round with a stone wall about ten feet high. On the outside of the wall there was a wide parapet running about two feet below the top. This parapet was being patrolled by two husky men, police guards with revolvers slung at their hips.

For, in this enlightened year of 1958 there were still cranks and fanatics who said it was going against nature to try to fly to the moon. More than one loony-bin society had said that they would stop at nothing to smash the impious rocket. The Director was taking no chances. Besides these

guards at the rocket-pit itself, others were posted at intervals along the ring-fence which encircled the grounds of the Centre.

The guards knew Kimpie and made no move to stop him as he climbed the steps to the parapet. He nodded to them and looked over the wall. Down in the pit stood the rocket, *M.C.R. One*, poised on its ramp, with its blunted nose thrusting skywards as if already eager to be whirling through space.

The rocket was not particularly impressive. It was less than a hundred and fifty feet long and at its widest was not more than twenty feet across. It was, in fact, much smaller than the hull of many of the strato-cruisers operating on the world's air-lines. Yet inside that compact streamlined shape was housed a whole host of scientific wonders.

"Swell baby, isn't she?" grinned one of the officers, seeing Kimpie's rapt stare. "Pretty fast, too, they tell me."

"Four hundred miles a minute is her scheduled speed for the first moon-trip," said Kimpie. "That's well under the maximum of which the rocket is capable, but we have to have a margin of safety, you know."

The guard looked at his partner and flicked a wink at that "we".

"What makes her go?" he asked. "Can you tell us that, mister?"

"I can try," said Kimpie. "Of course, it isn't easy to describe the process in non-technical terms, but roughly this is what happens."

He launched into a description. It was full of gaps, because he was, after all, only a very minor cog in the vast organisation behind *M.C.R. One*. Many of the scientific and engineering developments incorporated in the rocket were beyond his range, but nevertheless Kimpie could tell a tale which sounded impressive to the layman.

He talked about liquid hydrogen which underwent a nuclear transmutation in the rocket's fission plant, so generating the exhaust gases which were to thrust the projectile through space. He touched on the astounding progress in

metallurgical technique during the past six or seven years which had made space-travel a practical possibility.

Kimpie enjoyed himself. He forgot about the guards, until he suddenly caught sight of the spreading grin on one man's face.

He took a step forward, fists clenched. His face was drained of colour, and in the white mask his eyes glared with blank, insensate fury. The smiling guard was standing near the wall. Behind him was the coping-stone and beyond, the precipitous drop to the concrete floor of the pit.

As Kimpie moved forward, a hand grabbed at his collar and he was swung round to face the other guard. There was no grin on this man's face.

"On your way," he grunted, shoving Kimpie down the steps.

Kimpie blinked. He was shaken by the sudden onset of rage. He used to get mad at times when he was a kid, but he'd thought he was over that stage. Lately, he had been having those queer fits again. Ever since he'd applied for a place on *M.C.R. One* and had had his application returned with the word "Impossible" scrawled across it in the Director's own handwriting.

He turned towards the guards. They were looking down on him, and Kimpie felt more dwarfed and ineffectual than ever. With a shrug he abandoned the thought of explanations or apologies, and walked away.

"That's a cuckoo, right enough," said the guard who had pushed Kimpie down the steps. "He'd have pushed you over the wall without a thought, as soon as he saw you were just stringing him along."

Kimpie took his shabby convertible from the garage and drove down to the railroad depot. He had to park some distance away, for most of the population of Freestone and the surrounding country had come to see the arrival of Eb Barnway from Blettsville, Iowa, the seventh passenger on the rocket. The New York tabloids had clapped one of their sourly humorous labels on Barnway. He was referred to only as the "Ballast".

Lee Dury and Helen Pennant were in the forefront of the crowd, waiting to welcome Eb and drive him to the Centre. The Press was well represented, and a telecast of the arrival was being put over on the local station. When Lee turned from watching the television cameras being manoeuvred into position, he saw that Helen was in smiling conversation with a young girl. A few moments later, Lunt Palfrey, the Director, joined them.

"That'll be Carol Friar, the girl Jud spoke about," thought Lee. "I see what he meant."

The girl had the figure and the legs to take and keep Jud's eye. And her face, when you reached it, was in the same class. She wore a dark blue suit and hat which set off her fair colouring and achieved the expensive miracle of looking businesslike and seductive at the same moment.

Lee watched them. The situation got under his skin, touched off one of his pet prejudices. He had no time for women who used the weapons of their sex in business, and just see the way this Friar girl was going to work on the Director! He was talking freely to her, while from time to time she made an unobtrusive note.

Palfrey had the reputation of being a recluse. He wouldn't have talked to a male reporter that way, Lee was sure. A doctorate of science and a hatful of other degrees were no armour. The smarter they were, the harder they fell for the old, old routine.

The clanging train bell slanted Lee's thoughts in a different direction. Eb Barnway, easily recognisable from his photographs, stood waving in the doorway of the first car. He jumped down, a stocky, middle-aged figure with a broad red face and a spreading waistline.

"Hi, doc," he greeted the Director, whom he had already met.

Introductions to Helen and Lee followed, and then Eb was flung to the Press. The reporters gathered round, and the crowd listened tensely. This hick looked good for a few laughs, anyway.

The questions rattled at Eb like gravel hitting a window. He wasn't to be hurried, though, and gave his answers in a slow drawl.

Yes, he was mighty proud to be going on the first moon-flight. No, he wasn't scared — not more than a mite. Yes, he had great faith in the rocket and in Lee Dury. When he travelled, he usually went by train because he never felt quite easy in a plane. But he guessed it would be different in a rocket — he'd be going too fast to get scared.

He got another easy laugh from the crowd. This Eb Barnway might be a hick, but he'd held his own with the Press boys and girls quite well. Carol Friar put a question.

"Some people have been calling you the 'Ballast', Mr. Barnway. Anything to say on that?"

Eb looked down and patted his waistband.

"Looks like they picked the right man for that job," he said.

Kimpie pushed out through the crowd and went to collect his car. This man Barnway was an oaf, a mere clown with a natural trick of playing to the gallery. And yet he was to go on this trip, while a man like Kimpie, who could have pulled his weight as a member of the crew, had to stay behind.

He started off with a jerk which, although cushioned by the fluid transmission, made his tyres spurn up the dust of the parking-lot. He swerved viciously in an attempt to run down a scurrying cat, and then bumped on to the road.

By the time he had reached Gable Ends, he had cooled off considerably. Before he had reached the door of the large, colonial-style house, it was opened by a tall man, who came out to meet him with arm extended.

"Good evening, Mr. Kimpie, do come inside. I have sent my servants away because I didn't want our little talk to be — er — interrupted. I think you can help me to achieve a great ambition."

CHAPTER TWO

THE PLOT

Kimpie didn't like meeting new people, especially if they were rich people. He had to steel himself for the ordeal, and his manner with strangers was gauche and prickly. Kimpie could smell out a sneer or a piece of condescension before the party of the second part had even got round to thinking that this little guy with the bat ears was just a nothing. Few strangers ever bothered to make a second attempt to probe the Kimpie defence-lines.

Warner Leming's house was as smoothly elegant as its owner, and normally both would have set Kimpie's hackles rising. And yet inside three minutes from his arrival he was sitting comfortably in an armchair, nursing his second highball and watching the smoke curl up from an expensive hand-made cigarette.

He felt relaxed, at home, in this beautiful room. Maybe that was the first highball at work, but Kimpie thought not. A small-scale miracle had taken place — he felt himself liking Warner Leming on sight. Kimpie naturally was not to know that Leming's engaging personality and apparently sincere charm had been useful assets in his climb to wealth.

"I'm not the man to waste words when dealing with a person of your intelligence, Mr. Kimpie," smiled Leming. "I've had most everything I wanted from life, and there is only one thing more I ask."

"And that is?"

"Immortality."

The haze of Scotch hadn't clouded Kimpie's brain to

any considerable extent. He leaned forward in the chair and looked at Leming warily.

"I'm not cracked," said Leming, "or, at least, not more cracked than four out of five other men. What I mean is this. I want a place on that first trip to the moon — and I'm going to get it."

The last words were not a boast, not even a definite statement of intention. They were thrown in almost as an afterthought.

Warner Leming was going on that moon-trip. He'd made up his mind and that was all that was needed to be said. Any folks who thought they were going to stop him were just plumb crazy. All this and much more was implicit in those casual words.

For a moment Kimpie felt a blind resentment. This Leming guy — who did he think he was, anyway? But Leming was speaking again.

"The names of the first men and women to make a trip to the moon will never be forgotten. And certainly the name of the man who succeeded in stowing away on that trip would go down the ages. That name is going to be Warner Leming."

One small cool corner of Kimpie's mind kept telling him that this man was a screwball. Yet he felt himself being overwhelmed by the calm conviction in Leming's voice. The physicist found himself leaning back to listen.

"You are wondering two things, Mr. Kimpie. First, how it can be arranged for me to stow away on that rocket which will be searched through with a tooth-comb before the take-off. Second, where do you come in?"

Calmly and rationally, as though he were outlining a new business project to a board meeting, Warner Leming unfolded his scheme. When Leming had done, he did not ask Kimpie for his opinion. In fact, he didn't seem interested in Kimpie's reactions to the crazily ingenious plan.

"Have another drink?" he said, taking the glass from Kimpie's limp hand.

"How did you get to know all this?" asked Kimpie.

"About my movements, I mean? And the routine inside the Centre itself? The place has been closely guarded for months."

"I have my methods," murmured Leming. "You'll take it neat? No? There's the siphon by your elbow, then."

Kimpie felt his liking for his host ebbing away. To judge by the luxury of his surroundings, the man was a millionaire, but that didn't give him the right to patronise a scientist. He seemed to be taking Kimpie's co-operation in the scheme too much for granted.

"Why did you pick on me?" asked Kimpie. "There are other junior officers on the scientific staff at the Centre who would be able to help you even more than I could."

"I am a student of human nature, Mr. Kimpie," purred Leming. "I have watched many of the young men at the Centre during the past months, but I am quite certain that *you* are the man for my money."

Kimpie glared at him. Did Leming think a scientist could be bought? Leming returned the glare with a look of cool, matter-of-fact benevolence. It suddenly occurred to Kimpie that his host had only answered one of the two questions he had himself posed. He hadn't yet said what there was in the scheme for Kimpie himself.

"It'll be a big risk for me," the physicist pointed out. "Just about ruin my career if it was discovered that I had helped you."

"We shall be able to cover up your tracks perfectly. I realise, though, that I can't expect you to help me without some prospect of reward, and naturally I shouldn't dream of insulting you by offering a crude bribe."

Kimpie thought he began to see daylight through the forest of words.

"I am an extremely wealthy man," Leming went on. "and I can help you to achieve what I know to be your great ambition. With my assistance, you can embark on the programme of research work which you have sometimes discussed with your sceptical colleagues."

"How so?"

"I own a controlling interest in four or five industrial groups which maintain their own laboratories. Nothing would be easier than to appoint you to the staff of one of these companies. Unlimited facilities for your research, and a healthy salary. How does it strike you?"

Kimpie thought it over. In some ways it struck him as a great idea. Some folks might have accused him of disloyalty, and yet what loyalty did he owe to the I.I.S.? The Director and all the other high-ups had always treated him like dirt.

Now, here was his chance not only to get even with all that bunch who had despised him and pushed him around, but also to get into a real lab, with the opportunity to show what K. Arthur Kimpie could really do. Of course, he would have to lie doggo, for a time. Stay on at the Centre for a few months after the moon-trip and then resign quite casually to take up a new appointment in industry. Leming's connection with the move would never be made public.

That was the kind of detail that would have to be fixed with Leming before he gave his assent. Yes, the more he thought about it, the better the idea appeared. He would be able to hug to himself the thought that all *their* wonderful plans had been shot up by him, the unconsidered Kimpie.

Leming sat waiting for the idea to flower in Kimpie's brain. The millionaire had hardly tasted his first highball. He gazed placidly at the oak panelling of the wall opposite, every now and then turning his slate-grey eyes on Kimpie who was slumped in his chair, gnawing at his lower lip.

Kimpie's professional conscience was being outgunned by his thirst for revenge on a world which refused to see him as Kimpie saw himself. The conscience was badly battered, but not entirely defeated.

"I'll have to think about this, Mr. Leming," said Kimpie, getting up. "I'll let you know tomorrow."

Leming had summed up his man, and he did not attempt

to press home his attack. He helped Kimpie into his coat and as they were leaving the study, almost as an afterthought he picked up a glossy brochure from his desk. He flipped through the pages and opened it at a coloured inset.

He passed the book to Kimpie. It dealt with the activities of one of the firms he had mentioned, and the inset showed the plant's fine research laboratories. This, said Leming casually, was the kind of set-up he had in mind for Kimpie.

"By the way, you will of course regard our little talk as confidential, Mr. Kimpie," said Leming when he shut the car door after his visitor. "I am quite sure I can rely on you."

Kimpie nodded, promised once again to phone Leming in the morning, and drove off. He realised he wouldn't get anywhere by trying to report Leming to the police or the Centre authorities. The millionaire would merely deny that the subject of stowing away had ever been discussed between them. Kimpie would be discredited, and he would, too, have made a powerful enemy in Leming.

He pulled into the side of the road and tried to think. His mind started off on a crazy jig, and it was something of a relief when Kimpie remembered that he had work to do. A report on the behaviour of the space suits, and he had intended to work on it that evening. The cool air had cancelled out those highballs — almost. He would go back to the Centre and at least make a start.

Kimpie felt bucked at having put off the awkward moment of decision. His mind was ticking over like a well-oiled machine ; he'd write a paper on those space suits which would impress even that super-conceited stuffed shirt, the Director.

He drove fast and not very skilfully, but he got to the Centre in one piece. The guards let him through and soon Kimpie was in his laboratory, sorting out his notes and record charts. He picked up the recordaphone and started to dictate the first draft of his report.

It was sticky going at first, but soon it began to come. Ripe, fruity phrases and long, involved sentences began to come . . . he lost himself. . . .

The lab door opened and six or seven people, headed by the Director, came into the room. Kimpie was just going to town on the need for "a greater degree of elasticity or flexibility" at the joints of the suits. He broke off and stood up awkwardly.

"Hullo, Kimpie," said the Director. "I hadn't expected to find anybody working here as late as this."

"I thought I'd turn in this report about the Mark III suits, sir," said Kimpie.

Behind the Director he could see Helen Pennant, Lee Dury, and two or three members of the Centre staff, including Dolf Knight and Harry Keen, who would be going on the trip. Eb Barnway was in the rear, listening to some point that Keen was trying to make. Keen was an engineer, a tall thin fellow with a mind that darted about like a squirrel. He could never figure out why anybody could find the mechanics of nuclear fission difficult to understand.

"Okay, Harry," said the Ballast. "So it's as simple as that, is it? If it's going to make you feel better about having me come along on this trip, I'll pretend to understand. Pleased to meet you, Mr. . . ."

Eb had seen Kimpie standing beside his stool, with his notes and the recordaphone on the table. To Eb, who didn't take much account of social, intellectual or any other kind of classification, this was just one more scientist. Just another of these modern wonder-workers who had made moon-travel a practical possibility.

So Eb shoved out his hand and greeted Kimpie warmly. He didn't notice the faint tightening around the Director's thin mouth, and even if he had it wouldn't have made any difference to the Ballast.

"Kimpie's my name," said the little fellow with the bony forehead. "I'm glad to know you, Mr. Barnway."

"We've come along to see this vacuum chamber where our space suits have been tried out," said Eb. "I'd sure like to try one of these suits on and maybe take a turn up and down the chamber."

The Director frowned. His staff would have recognised the danger signal — the programme for the evening, as *he* had laid it down, was being upset by this whim of Barnway's. Dr. Palfrey raised no objection but he looked meaningfully at his wrist watch.

He could have saved his time. Eb was already rummaging with Kimpie through the large locker where the space suits were stored. They picked out the suit which had been made to Eb's measurements and with a good deal of grunting on Eb's part, Lee and Dolf Knight put him into it.

"You'd better come along with me, Mr. Kimpie," said Eb. "I'd appreciate some help from an old hand."

Kimpie was soon into his suit. Harry Keen clamped on Kimpie's helmet.

"How're you feeling?" Kimpie asked.

Eb's voice boomed back over the two-way telecom.

"Durned hot, but lead on, Kimpie."

They spent ten minutes in the chamber. Barnway enjoyed himself, playing with the new experience like a child presented with a fresh toy. Everybody, even the Director, enjoyed his enjoyment. Everybody, including Kimpie.

He was one of the group. He was one of the central figures. Life felt grand. It was only when they had peeled off the suits, and the others were making ready to leave, that Kimpie started to remember his grouch.

Eb Barnway put a large foot into a tricky situation.

"Hey, doc," he said to the Director, "you mentioned something about our going to your apartment for a drink when we'd finished the tour. I take it the invitation includes Mr. Kimpie?"

Palfrey's hesitation whipped Kimpie like a lash across a

raw wound. The Director kept himself aloof even from the seniors on his staff, and it was only on a special occasion like tonight's that even Helen Pennant or Dury would have been invited to his flat for a drink. Kimpie, one of the underlings, was right out.

Eb had put the Director on a spot, though. Dr. Palfrey's poise was only momentarily shaken, and he turned to Kimpie with a courteous invitation to join them. Kimpie longed to be able to say, "To hell with you and your invitation," but he mumbled acceptance and tailed along.

The Director's apartments were austerely furnished, but there was nothing austere about the Scotch he produced. To everyone's surprise Eb contented himself with a glass of ice-water. His blundering, apparently insensitive geniality trampled down the slight tensions and awkwardness which Kimpie's joining the party had caused.

Soon everyone was talking freely and amicably. When a pause threatened, Eb would turn to Lee, Helen or Keen and ask some question about the coming flight. He was burning to know everything about their plans, their hopes and fears.

Midnight came. The Director had thawed right out, and Kimpie was listening to the good talk. Now and again he contributed something himself, in the rôle — which Eb had thrust upon him — of the "practical guy who knew about such important details as space-suits, working temperatures and so forth".

Eb stood up, patted his waistband, and grinned down at the Director.

"I'm not a drinkin' man, but I aim to give my stomach a fair deal. I'm getting kinda hungry."

The eminent scientist flushed and would have apologised.

"Don't get me wrong, Dr. Palfrey," said Eb, with his disarming grin. "I guess my party manners aren't what they should be. Maybe you other folks won't admit to feeling hungry, but I just have to tell the truth. Now, see here, doc,

if you'll give me the run of your kitchen for a while I'll fix a snack for the whole crowd. How about that?"

"That's most kind of you," said the Director. "Can I help?"

"Kind of you to offer, sir, but I think I'll take a practical man along with me. Kimpie, care to give me a hand?"

Kimpie positively jumped to his feet. In his eagerness he sent an empty glass flying, but Lee Dury fielded it splendidly. Eb and Kimpie went into the kitchen, where the Ballast inspected the contents of the refrigerator.

For twenty minutes, Kimpie was kept busy. He minced ham, buttered crackers, put out coffee cups. All the time, the tubby Eb worked deftly at the cooker, his red round face wearing a look of pleased concentration.

"Here we come, folks," he sang out when he and Kimpie pushed the loaded trolley into the next room.

"Savoury omelette!" whistled Helen. "I thought I could turn out a good omelette, Mr. Barnway, but you've got me beat a mile."

The free-and-easy meal capped the pleasant evening. The party broke up in the friendliest mood, and Eb drove off with Lee Dury to his hotel. Helen accepted Kimpie's offer of a lift, and when he went to bed he felt, for the first time in years, that he had a place in the scheme of things.

He dropped off to sleep without thinking about Warner Leming. It was in the small hours that Kimpie woke up to face the problem which he had shelved. Was he going to help Leming, or was he going to play the game by his colleagues?

Some of the mellow mood of the evening still clung to Kimpie. There wasn't any problem now. He was going to do the straight thing. That Leming would find that one thing his dirty money couldn't buy was the honour of a scientist.

A new thought hit Kimpie. He sat up in bed and lit a cigarette, pulling hard as his brain started to race. It was an idea, all right! Gee, if he could pull this one off, he'd

hit the headlines himself in a big way. He'd be a national hero, like Lee Dury himself.

Kimpie didn't sleep again that night. As soon as the sky began to lighten, he got up and dressed. He spent some time on the telephone and after ringing her paper, succeeded in obtaining Carol Friar's private number. The girl's sleepy voice answered him.

He had a tough job to convince her that he was not just another of the mentally unbalanced people who plague a reporter's life. More than once Carol would have hung up, but something in the intensity with which Kimpie made his points kept her listening in spite of herself.

"Right, I'll come along," she said at last. "I can borrow one of our helicopters and be at Freestone within the hour. But let me warn you, Mr. Kimpie. This story of yours had better be good!"

"It is," said Kimpie. "I can promise you that."

He was down at the field to meet Carol when she stepped out of the 'copter. The girl looked as sparkling and fresh as the morning, but Kimpie didn't notice that. He was too busy rehearsing the story he was going to tell.

They drove to a small country club, where Kimpie was a member, and had breakfast in the quiet cafeteria. Kimpie told the full story of the proposal which Warner Leming had made to him. Perhaps not quite the whole story. Kimpie made it appear that never for one moment had his loyalty to the I.I.S. been in doubt.

"If this is true, this is a story in a million, Mr. Kimpie," said Carol. "But I've worked in newspapers for some time now, and you get mighty suspicious in that line. Why should Warner Leming take such risks to go on that moon-trip? He must be one of the wealthiest men in this country."

"I'd never heard of him before last night," admitted Kimpie, "but then I don't take much notice of anything outside my own subject."

"I understand," smiled Carol.

"I'll tell you this though," said Kimpie. "That Leming fellow is whacky on the subject of this moon-flight. He gets a queer kind of look in his eyes when he even talks about it. That's nothing unusual, of course. All sorts of people have applied for places."

"I know. The Director told me he kept a special office staff doing nothing else but turning down applications."

Kimpie reddened. He was remembering his own application with the word "Impossible" scrawled across it.

"You'll realise, of course, that I can't touch this story without some sort of proof," said Carol.

"Yes, I know, and I've already made the necessary arrangements," said Kimpie. "I've phoned Leming and told him there are some final points I'd like to clear up with him before I say 'yes' to his scheme. I'm going to his house at nine o'clock. The police will be calling at twenty minutes past the hour. You just stick around, Miss Friar, for the scoop of the century."

"Why did you pick on me as your Press contact?" asked Carol, with a smile which would have dazzled — and infuriated — Lee Dury.

"Because, since you were chosen to represent the United Nations Press Alliance on the moon-flight, you are the best-known journalist in the world," said Kimpie calmly. "I want this story to hit the headlines, and if you handle it, I know it will!"

Kimpie dropped Carol about a mile from Gable Ends and drove on for his interview. A police car was parked in a side-road not far from the house, but the occupants took no heed of Kimpie.

The millionaire greeted him cordially. There was, however, a hint of asperity under the surface warmth of Leming's manner. He wasn't used to making mistakes in his snap judgments of his fellow men, and he had been certain that Kimpie would be a willing partner in his scheme. Now, it seemed, the little fellow had last-minute doubts.

"What are these points you want to clear up with me, Kimpie?" Leming asked.

"I've made a few notes of the details I'm not clear about," answered Kimpie, opening up his battered brief-case and pulling out a sheet of paper.

He propped the case against his chair and ran down the sheet of notes. Then he began firing questions at Warner Leming. They were trivial points, and Leming had to fight down his irritation. He succeeded, and patiently countered all Kimpie's objections. In the course of the discussion he went right through the details of the scheme once again.

Precisely at twenty minutes past, two police officers came into the kitchen at the rear of the Leming house. The man-servant and a coloured cook were talking together.

"Stay where you are," ordered one of the officers. "We'll go through and call on Mr. Leming unannounced."

They entered the study. Leming's eyes narrowed when he saw them, but he recovered himself quickly. He asked the policemen what he could do for them, but they ignored him completely.

"Did he shoot the works?" one of them asked Kimpie.

Kimpie made a queer gargling noise, for the words wouldn't come. His nerves had been at full stretch during this interview, and he was about through. He could only nod feebly and gesture towards his open brief-case.

The detective picked up the case and lifted out the small microphone which Kimpie had collected from the police earlier that morning.

"That record's going to make pretty interesting hearing, Mr. Leming," said the officer. "I guess you'd better come along and hear us play it through."

Warner Leming stood up immediately. He made no answer to the policeman's suggestion but it was plain he was not going to offer any resistance. As he walked out his look made Kimpie shrivel.

Kimpie soon began to feel better. He went outside and

met Carol coming up the drive. She had had a short talk with the two police officers, and she steered Kimpie quickly through his version of the story. She had already warned her news-editor that she might be on to something big, and within a few minutes she was on the phone dictating a story while her editor listened in.

"That's great, honey," he yelled when she had done.
"Keep with it. Stick as close to Leming as you can."

"What about Kimpie? He'll get a build-up, won't he?"

"Hell, no! That's small stuff. Any guy at the Centre would have done the same. Warner Leming's the big name in this story and, girlie, what we'll do for that whacky, moon-mad millionaire!"

CHAPTER THREE

SHOW-DOWN

Kimpie felt pretty good. True, the Press boys and girls hadn't been after him as quickly as he had expected. The story about Warner Leming's arrest had broken several hours ago and up till now the only reporter he had seen besides Carol Friar was a young cub from the local paper. And even he had been more interested in hearing what Leming had said and done than in Kimpie's own story.

He hadn't seen Carol since she rushed off to file her first story of the arrest. Still, he wouldn't mind betting that half New York was reading about the way he'd fooled that millionaire.

Now, here he was sitting in the ante-room to the Director's office waiting to see Palfrey himself. Maybe the big shot wanted to thank him personally, and maybe even give him a better job. This morning's affair was going to open a whole lot of people's eyes to the fact that K. Arthur Kimpie was a pretty smart fellow.

The telemaster on the secretary's desk buzzed.

"I'll see Mr. Kimpie now," came the Director's cool voice.

Kimpie stood up, remembered to square his shoulders, and walked into the Director's room. Lunt Palfrey was sitting at his huge desk, with Lee Dury on one hand and on the other the police captain who was in charge of the rocket guard.

"Sit down, Kimpie," said the Director. "We want to ask you some questions."

His tone was brusque and sharp. He didn't appear to

realise that he was addressing a man who would rank as a national hero just as soon as the public heard how he had foiled Warner Leming's plot to stow away on the rocket.

"So he wants to ask me some questions," thought Kimpie. "The hell with him! I'll answer his questions if I feel that way, but otherwise the hell with him!"

Resentment bubbled in his mind, but to outward appearance he was the usual rather cowed Kimpie. He sat on the edge of the chair and waited for the inquisition.

"How long have you known this man, Leming?" asked the Director.

Kimpie explained that he had never heard of the millionaire before the previous day. The three men on the other side of the desk exchanged glances. The police captain's face registered disbelief.

"So, this Leming just happened to pick on you to help him with this plan to stow away?" he asked. "It could have been anybody on the Centre's staff, but it just happened to be you, Kimpie? Is that your story, eh?"

"That's the truth. I never exchanged a word with Warner Leming until last night."

Kimpie had gone white, and there was that queer look of blind fury in his green eyes as he glared back at the captain. Lee Dury intervened.

"See here, cap, we're only here to get at the facts about this stowaway attempt. Kimpie isn't on trial, I guess. Maybe we had better leave the questioning to Dr. Palfrey, don't you think?"

The captain shrugged and leaned back in the chair, nursing one knee in two large red hands. Lunt Palfrey waited for a few seconds to allow Kimpie's surge of fury to subside, and then asked the little man to give them the details of Leming's plan. This Kimpie did willingly.

Leming's scheme had been based on accurate knowledge of the construction of the rocket and of the organisation of the Centre. Lunt Palfrey looked grave as Kimpie made his report, for it was obvious that Leming's money had been

able to buy the most secret information from trusted members of the I.I.S. staff.

"Okay, so the general set-up was this," summed up the captain. "Leming was going to steal one of the spare space-suits from the stores, and break into the rocket while the attention of the guards was being distracted. How was that going to be arranged, by the way?"

"I — er — Leming was going to arrange for somebody to start a fire in the end bay of the testing-house," said Kimpie. "The guards patrolling round the rocket-pit would be the first to see the flames and they would naturally leave their posts to deal with the fire."

"Yeah, and having found his way into the rocket, Leming was going to hide in one of the hydrogen tanks," said the police officer. "Is that feasible, Dr. Palfrey?"

"I would have said it was impossible yesterday," replied the Director. "But, with a man as crazy-keen to make the trip as Leming seemed to be, it might be done."

"It could be done if you had a space-suit and an adequate oxygen supply," said Kimpie confidently. "Those tanks have the usual baffles set at intervals to stop the contents from surging. Leming was going to place something across the top of the two baffles nearest the man-hole so as to make a platform."

"And he could lie there doggo while the tank was being filled before the take-off," said Lee. "Even if the liquid came up to the top of the tank, which it wouldn't, he would be safe inside the suit. Then, once we were well away, I suppose he would start hammering to be let out."

There was silence for a moment.

"Well, only a nut would have thought up a scheme like that," said the pilot, "but, it might have worked out — except for Kimpie."

"Except for Kimpie," grunted the captain. "There's a whole heap of questions I want to ask you, Kimpie. Why didn't you come to the police immediately Leming told you

of his plan? You fell for it, at first, didn't you? And what made you change your mind?"

"I don't understand," said Kimpie.

"What made you decide to double-cross Warner Leming and turn him over to the police?"

This time it was the Director who broke in. Kimpie stood up, fists clenched, the pulses hammering visibly in his bony forehead. Dr. Palfrey snapped an order to sit down, and Kimpie yielded almost automatically to the authority in the Director's tone.

"That will do," said Palfrey turning to the captain. "We know now how Leming intended to stow away, and you can doubtless make arrangements to thwart any similar attempt."

"Two extra guards posted inside the rocket will take care of that," grunted the captain, "but there's been a serious leakage of information about the rocket. I ought to . . ."

"I believe your responsibility is confined to safeguarding the rocket, captain," said the Director. "I shall of course be making a full investigation myself, and will report to the Society and to United Nations. Good morning."

When the red-faced captain had gone, Lee Dury excused himself. He had no wish to be present at what seemed likely to be a painful five minutes for Kimpie.

As soon as he was alone with Kimpie, Lunt Palfrey waded in. He had been shocked to the marrow at the thought that somebody on his staff had sold secret information to Warner Leming. He shared the captain's suspicion that Kimpie knew a lot more about the subject than he had yet told, and now that there was no outside interference the Director proposed to get the truth even if he had to shake it out of this little man with the weak, obstinate jaw.

He grilled Kimpie with cold, pointed questions. Questions which all pointed one way. Kimpie began to see the shape of the Director's suspicions as the merciless hammering went on.

He, Kimpie, and Warner Leming had been in on this

plot for a long time. Kimpie was in a position to obtain all the information which Leming had used. But at the last minute he had got cold feet and sold out to the police.

That was the way of it, suggested the Director. Kimpie sat and seethed. He had come in here to be *praised*, not to be kicked around. He wasn't going to stand for it, even if it meant losing his job.

A thin trembling finger jabbed within inches of the Director's nose. Kimpie spluttered as he tried to gather his thoughts and frame the words he wanted to say.

"Just ask Leming himself," he yelled. "Ask him! He'll tell you that the first time I'd spoken to him was last night when I visited his house."

"I should want some further proof than the word of Warner Leming," said Palfrey. "He might shield you in order to claim that his plan was a mere last-minute impulse rather than a carefully laid scheme. You had better go now, Kimpie. I will consider what I am going to do about your position here when I am in a calmer mood."

Kimpie clung to enough vestiges of common sense to get out of the office, through the ante-room and into the corridor. At the far end of the corridor was a wash-room. Kimpie just made it.

For long, shuddering minutes he retched and strained over the basin. Afterwards he cleaned himself up. He looked in the mirror and saw a face the colour of dirty putty; his eyes were red-rimmed and his hair hung dankly over his high forehead.

Yet Kimpie felt calmer than he had felt for a long time. He went back to his desk, without attracting any attention except from his neighbour who wanted to know where Kimpie had got the "stuff" to give him a hangover like that.

When Lee Dury had left the Director's office, he made his way to the testing-house. The pilot hadn't relished the scene with Kimpie and he hadn't liked the way Lunt Palfrey had almost licked his lips at the prospect of annihilating Kimpie. Lee knew the value of discipline, but he hadn't much

time for a man who enjoyed flattening out a poor little runt like K. Arthur Kimpie.

Crossing the field to the test-house, Lee fell in with Eb Barnway. Lee brightened up immediately. He was getting to like the Ballast ; it was a pleasant change to deal with a simple uncomplicated soul like this man from the open spaces.

"Hi, Lee, can I come along with you ?" asked Eb. "Everybody's so all-fired busy around this place, I just feel I'm in the way all the time."

"Between you and me, Eb, I get the same feeling," grinned the pilot. "But just wait until we get that rocket flying. We'll show 'em."

They walked down the long central corridor of the test-house. The vast building was full of a subdued humming sound ; Eb could feel a faint throbbing in the ground under his feet which steadily increased as they approached the bay at the far end.

Lee pushed open a door and the humming grew slightly louder. Eb saw that they were in a kind of artificial cave, a tunnel with immensely thick walls of concrete. At the other end was a small window which seemed to be lit with a peculiar glaring light. Two men were watching a large panel with several rows of dials on it.

One man was Harry Keen, the other a stocky fellow whom Eb had not yet met. They both nodded briefly at the newcomers and then turned back to the dials. Lee looked over their shoulders and when he took in the message of the gauges he whistled.

"This is it, then, Harry ?" he asked. "How are we doing ?"

"Ask me in ten minutes," grunted the engineer. "She's been taking breakdown thrust for nearly fifty minutes, and is still going like a bird. All the same . . ."

He crossed his fingers, and looked back at the panel. Lee chuckled and beckoned Eb to come over to the small window. It was some time before the Ballast could make

out anything except a mass of violet and white flames. Then, when his eyes grew used to peering through the thick plexiglass he saw that the flames were coming from a row of stubby exhaust pipes, behind which loomed the gleaming shape of something that looked like a large metal egg.

"Take a good look at it, Eb," said Lee. "One of these babies is going to take you and me to the moon — and bring us back, if our luck holds. You'd better look at it now, for you won't get much chance on the rocket."

"Gee, is that tiny thing going to drive the rocket half-a-million miles?" asked Eb. "I'd figured on seeing something much bigger than that."

Lee explained that the fission unit weighed over half-a-ton and that, small though it was, the designers had had quite a task to fit it into their ideal rocket-form. The discovery two years before of the new molybdenum alloy known as "Rodingite" had enabled the research team to develop a motor capable of operating at the phenomenally high temperatures generated in the process of nuclear fission.

"I know Keen, but who's the other fella?" asked Barnway.

"He's Bill Redding, the only member of the rocket crew you haven't met," explained Lee. "He's an engineer, and a good one. Harry and Bill have lived with these motors since they were blue-prints, and they understand 'em as well as they understand each other — which is saying something."

"She's there!" cried Harry Keen at that moment. "Take her back twenty, Bill."

The stocky man turned a shining knob, keeping a careful watch on the movement of a needle on one of the calibrated dials. Eb heard the high-pitched humming sink by two or three half-tones and the throbbing of the ground eased slightly. Harry Keen and Bill Redding shook hands solemnly.

"What's she been doing?" Lee enquired, after he had introduced Bill to the Ballast.

Keen quoted the thrust output.

"What does that mean in miles?" demanded Eb.

"Close on seven hundred a minute," answered the engineer. "Call it forty thousand miles an hour, and you won't be far out."

Eb flinched slightly.

"Less than ten years ago, we were gaping at travelling faster than the speed of sound. Now, if the rocket travelled full out, the moon is only about six hours' flight away. It would be just screwy — except that it's happening."

Lee was looking thoughtful. The successful completion of this final test on the fission unit meant they were all set to go. The decision was his alone. He strolled away in company with Keen, leaving Bill Redding to try to explain to Eb the purpose of some of the dials on the wall-panel.

When they joined Lee and Harry they found that Helen Pennant had just come in. She looked pleased to hear the outcome of the test, and she turned to Lee with a smile.

"That means we'll be off soon, I suppose, Lee?" she said. "This calls for some kind of a celebration tonight."

"Just what I was thinking, Helen," said Lee. "How about dinner at the Flamingo, the whole bunch of us? My party."

Eb's broad face was a study in awed surprise. He seemed a good deal more impressed at the thought of visiting the exclusive Broadway night club than at the prospect of being in the first party of humans to see the moon at close quarters. Lee assured him that the Flamingo would let him in, even though he might have left his tuxedo behind.

"Better see if Carol Friar can make it, Helen," said Lee. "Our send-off party might as well be complete."

"Ye—es," said Helen, in a tone as casual as Lee's own.

Carol could make it, and she did. She looked good in a dark blue dinner gown which, as Eb put it, "was meant to make her look like one of those slinky sophisticated dames but instead just made her purtier".

It was a fine party. They all dined well, and that put sparkle into the conversation. The exclusive clientele of the Flamingo tried hard to let the moon-fliers enjoy themselves

by themselves, but the Ballast had other ideas. His cracks were loud and in the end most people gave up even pretending that they weren't listening.

During the floor-show, one of the chorines picked on Eb as the stooge in a dance act. As an encore, and spurning the offer of the microphone, he told a string of homespun yarns, earthy, but good. The New Yorkers rose to the Ballast and cheered him back to his table.

"Got to hand it to you," said Harry Keen, helping Eb on with his coat. "A guy who can do that on ice-water is *good*. I couldn't do it for all the scotch in the Highlands."

News of the party got round. A well-known columnist came into the club and spoke to Carol. He wanted to know what was in the wind, and Carol smilingly passed him on to Lee.

"Any special significance about this little celebration, Mr. Dury?" asked the columnist. "This is a — well, a kind of farewell party?"

"Since you're the first newspaper-man to ask me the question since I've known the answer myself, I'll tell you. We start at ten tomorrow morning."

"D'you mean this is a scoop for me? You haven't even told your own paper, Carol?"

"No, I've signed off from the Clarion for the time being. From now on I make my reports through United Nations Press, and I shall not be starting work until we leave on the rocket."

"Gimme that phone!"

When Carol drifted on to the dance-floor with Lee, the sight of the columnist gabbling his story into the phone just added to her pleasant holiday mood. Tomorrow she would be a reporter on the toughest assignment of her career, tonight she was just a girl at a party.

It seemed only right and proper that Lee Dury, pilot of the first moon-rocket, should dance well, but not too well. He smiled down at her, a cool friendly smile. That seemed right, too.

Yes, it was a swell party. Everyone agreed on that.

Lee watched the slightly unsteady but purposeful Bill turn into the side-street. With a grin, the pilot drove away so quickly that he did not see a figure detach itself from the shadows and follow Bill down the street. Bill was overtaken just as he reached the steps of his house.

"Well, hullo Kimpie," he said with more geniality than he would normally have mustered on seeing the physicist. "Come on in an' have a drink."

"Not now, Redding," said Kimpie. "Is this rumour true about the rocket leaving tomorrow morning at ten? The story is all round the Centre."

"It's no rumour, old son. The New York papers were bringing out special midnight editions when we left. We all did a telecast before coming away from the Flamingo. You should have heard the Ballast!"

"Maybe I'll change my mind and take that drink, after all," said Kimpie.

"Why, sure! Come on in."

CHAPTER FOUR

Moon-Bound

Lee Dury's decision had set a vast chain of events in motion. When Kimpie left Bill Redding's apartment soon after three o'clock the first signs of the world's reaction to the long-awaited news could be seen.

The streets of Freestone were thronged with traffic. The sidewalks were crowded with people and there were more cars on the streets than Kimpie had ever seen in the quiet little town. Everybody seemed to be heading towards the I.I.S. Centre, but nobody was getting very near it.

In accordance with a carefully planned scheme, troops were called out and road-blocks had been established on every road. Only those with official passes would be allowed past the blocks.

Kimpie had known what to expect and he had left his convertible in a Freestone garage. On the outskirts of the town he ran into the beginning of a miles-long traffic jam. Engines had been switched off, and although some people were indignantly asking why they were being held up, most of the crowd were in the mood to enjoy themselves.

One driver leaned out of his car and asked Kimpie if he knew why they couldn't get nearer to the Centre.

"When that rocket goes up, there is going to be one of the biggest blasts in history," said Kimpie. "At the Centre we" — he underlined the "we" — "aren't intending to take any risks of injury to spectators. That's why blast walls have been built round the rocket-pit and why nobody is being allowed to come within five miles of the take-off point."

"We shan't see much of the rocket then?" asked the driver.

"You wouldn't see much of it, in any case," answered Kimpie. "It will be taking off at about forty thousand miles an hour."

He walked on to the road-block where his staff pass was carefully examined. At the Centre, he found a number of people who had been unable to sleep and had come along to tackle some real or imaginary job in connection with the moon-flight.

Kimpie dug out his files of reports on the personal equipment to be issued to the rocket-crew, and he spent the time until daylight in going through these carefully. At least, if anyone looked into his room that was apparently his occupation, but an examination of his scrap pad would have shown that it was covered with doodles of rockets, moon-craters, space-suits and other things which might have provided a pointer to the turmoil in Kimpie's brain.

Lee Dury was at the Centre early. He had agreed to conduct a privileged party of journalists round the rocket, and soon after eight o'clock he took them in tow. With Harry Keen to answer engineering questions and Helen Pennant to deal with the scientific problems, Lee showed the party over *M.C.R. One*.

The greater part of the rocket was taken up by the fuel tanks and the fission unit. The crew's quarters occupied the front section and in the main cabin there were enormously thick windows of plexiglass which would allow the travellers good fields of vision fore and aft.

While the journalists were aboard, they were able to watch F.B.I. men completing their search of the rocket. Short of taking the rocket apart, they couldn't have been more thorough. There was no chance of a rat stowing away for an unauthorised flight to the moon, much less a man.

Photographs were taken of the austere living quarters of the rocket crew. One thing which attracted the attention of the news-hawks were the bunks, each fitted with straps and

huge buffers of latex-foam rubber at head and feet.

"That's for the take-off and landing, I guess?" suggested one man.

Lee nodded.

"Yes, we've had all sorts of laboratory tests, but nobody really knows what is going to happen when we go dashing off into space at forty thousand miles an hour."

Lee explained that the interior of the rocket was cushioned against shock by a layer of compressed helium between the inner and outer shells. The journalists admired the fission unit — what they could see of it. They gasped at Harry Keen's array of gauges and the no less imposing series of dials which faced the pilot's seat. Then they left the rocket under the watchful eye of the guards. The pit was cleared even of these privileged visitors.

"Check in with your suits at the briefing-room in a quarter of an hour," Lee told the other members of the crew.

After a few words with the officer in charge Lee went out on to the top of the control tower. From here there was a good view of the countryside round about, and he could see that every road on the far side of the blocks was choked with cars.

A cordon of troops had been thrown across the fields in a vast circle, against which the hordes of spectators lapped like the waves of a sea. Like the sound of the sea, too, was the low roar, made up of shouting, hooting car horns, laughter and indignation, which came to Lee's ears. Hill-slopes in the distance were black with figures.

It was a chastening sight. There could not be less than a million people gathered outside the protective cordon, the greatest concourse in history to watch one of history's greatest spectacles. Lee felt humbled and yet uplifted by this evidence of man's eager pride in the achievements of science.

He went down from the tower, and was rather pre-occupied when he encountered the Director. Dr. Palfrey thought that Lee was suffering from nerves and he was rather

obviously tactful in his references to the coming flight. He came along to the briefing-room where all the others had gathered.

They were putting on their space-suits, and there was a good deal of laughter and wise-cracking. Some of the laughter was rather high-pitched, and the cracks were extremely feeble. Fingers fumbled with straps. Yawns had to be smothered.

Lee knew the signs of nervous tension well enough. He had been on too many bombing missions in his younger days not to know ; but he wasn't worried. He knew he had a good crew here. The only unknown quantities were Carol and Eb, and he had a hunch that the Ballast wouldn't let them down. That Friar girl would probably make the grade, too.

The pilot became aware that Lunt Palfrey, with his oily, well-bred concern for everybody's welfare, was rubbing on frayed nerves. Lee would have headed the Director off, but Eb Barnway got in first.

" Say, doc, I'd be much obliged if you'd quit acting like the chief mourner at a swell funeral," he said. " Right now, I'll admit to being plumb scared about this whole business. I keep wondering how I ever came to get mixed up in this. You aren't making it any easier with that is-there-anything-I-can-get-you routine."

Dr. Palfrey tried not to look offended. Carol leaned over and planted a kiss on Eb's cheek.

" You beautiful man," she said. " I've been wanting to tell everybody for the last hour that I was frightened to death, but I should never have had the courage if you hadn't spoken up first."

" None of us is feeling exactly normal," Lee said briskly, " but we'll be fine once the rocket is on its way. Now get your helmets on, all of you. I'm going to give you the last check-over and then we go straight to the rocket."

The crew helped each other with the fastening of helmets and then they stood to receive Lee's " okay ". He did his examination quickly but thoroughly, and when he

came to Bill Redding he immediately noticed something which had previously been overlooked.

On the breast of Bill's suit was a faint brownish patch. Lee sniffed at it.

"Hydrochloric acid. How did you get that on your suit, Bill?"

"I don't know, Lee," boomed Bill. "I'll swear there was nothing on the suit when I checked it over last night."

"You'll have to get it changed," decided Lee. "That patch is a source of weakness and could easily cause a leakage of oxygen."

Lunt Palfrey intervened.

"Kimpie is responsible for checking over those suits. I'll deal with him. I'll make an example of the fellow."

"*I'm* responsible for the safety of these people," said Lee. "Kimpie made a slip-up which anybody could have made. If you don't mind, Director, I'll handle Kimpie. And might I suggest that you wish us all 'good luck' now, and go off to take care of the Press folks. I'm afraid we are likely to be bad company for 'outsiders' in our present moon-happy mood."

The Director meekly did as he was told. Lee phoned for Kimpie who came over to the briefing-room at speed. He flushed when the pilot pointed out the acid patch.

"I'm sorry, Mr. Dury," he gargled. "I guess I should have seen that, but things have been so . . ."

"Skip it," grinned Lee. "All we want is for you to fix Bill up with another suit right away. Can do?"

"Sure, if Redding will come along to the stores I can do that myself," said Kimpie. "The storeman said he wanted to watch the take-off from the shelter, and I told him I'd take care of things."

"Right," nodded Lee. "You've got five minutes."

Bill was back in under four minutes.

"Okay, Bill?" asked Lee, checking the new suit.

"Yeah, Kimpie picked me a dandy this time," answered Bill over his telecom.

"He didn't make much of a job of fixing this helmet," grunted Lee as he tightened the sealing-screw, "but I guess Kimpie is as excited as we are."

At a sign from the pilot they prepared to leave the briefing-room. Once they were outside they all felt better. It was a grand morning, with the sun blazing down from a clear sky, and this, combined with the near prospect of action, lifted some of the strain.

"I almost feel I'm going to enjoy this trip, after all," said Eb.

"I know I am," answered Helen Pennant. "D'you realise, Eb, that I shall be the first astro-physicist to be in a position to solve the problem of the moon-craters. The photographs taken on the radio-controlled rockets weren't sharp enough to tell us how the craters were formed."

"And I guess it's mighty important for you to know that, ma'am," said the Ballast.

Helen turned towards him and peered in at the small window of his helmet.

"These telecoms kill most of the tone in your voice, but I imagine your last remark was meant sarcastically," she said. "Just for that, you shall have a lecture on moon-craters once we are off."

"That'll be okay with me," boomed Eb. "In fact, I can hardly wait!"

They were near the rocket-pit now, and suddenly a thin, rather ragged cheer greeted them. A group of the Centre personnel most closely associated with construction of the rocket were being allowed to watch the take-off from the safety of a specially built shelter.

After the atmosphere of ballyhoo in which the rocket fliers had lived for months past, it was ironical that at the actual moment of their departure into the unknown their send-off should have been a rather self-conscious cheer from this small group. The fliers waved acknowledgment.

It was five minutes to zero hour. Time to do everything that had to be done, and no time to spare.

Everyone was looking to Lee Dury now. He had taken command quietly but firmly.

He held the reins, and his team did his bidding without question. This big fellow was the only man on earth who had taken off and landed the prototype rocket on which *M.C.R. One* had been based. At the moment of take-off, and more particularly at the moment of landing, he would have their lives in his keeping.

He assigned his crew to their bunks, personally checked the fastening of their safety-straps and saw that each man or woman lay with helmet pressed firmly against the rubber shock buffers. Then, and only then, did he fasten himself into his seat at the controls.

There was still one guard and one ground engineer left on the rocket. Lee checked his watch, strapped on the outside of his suit, and raised his hand.

"Throw her over, Rube, and then beat it!"

The engineer licked his lips nervously, but obediently threw in the switch. Instantly an almost imperceptible hum like the far-off buzzing of a hive of bees, started to sound from the engine-room. The fission unit had started up!

"Bye, folks, and happy landings."

The engineer gave a cracked laugh and then ducked out of the double hatchway. The guard followed, and Lee pressed down a switch which operated the closing mechanism. The door closed, and when Lee looked out he saw the engineer and the guard racing up the steps from the pit. They still had a good thirty seconds to do the hundred yards to the shelter, and they weren't wasting any time!

Lee grinned. He didn't blame them. It was going to be pretty shattering when this baby let go.

The humming was building up in volume and intensity. Harry Keen was listening to that sound, the muffled music of a million horse-power. He was that fission motor. That stupendous reaction was building up in his guts. He longed with an unspeakable intensity for the moment when the seal should be broken, when the exhaust gases would burst from

the jets, when *M.C.R. One* would lift from the pit.

Fifteen seconds to go !

Carol wondered what the people were doing, the million and more rubbernecks who had come to see the sight of the century. By now they would be sounding motor-horns, yelling. . . . Or perhaps they would be silent, watching the sky for a sign. Would she ever know how they had behaved ?

She told herself to snap out of it, and started to count slowly. The Ballast was already up to " fifty-five " and inside his helmet his lips moved slowly and he counted on.

Five seconds !

Lee watched the second hand of his watch. He held his stabiliser control lightly.

That second-hand behaved crazily, accelerating and slowing like no second-hand ever did before. With a final pounce it swung up to the " sixty ".

It had happened !

CHAPTER FIVE

THE MENACE

It had been the biggest fiasco in history.

That was the opinion of most of those million spectators. There had been nothing to see, and not much to hear. Some folks claimed that as they looked skywards they had seen a small black dot which had vanished before they could blink their eyes.

They were kidding themselves, said the disillusioned majority. It was like the scientist guys had always said it would be. *M.C.R. One* had gone off at a speed too great to be followed by the human eye. They would all have done better to stay at home and listen to the telecast commentary on the event. It would have been much more exciting.

The crowd started on the slow, temper-fraying job of sorting themselves out and making for home.

At the Centre everyone was happy. The launch had gone off with scientific precision. Men in protective suits were already spraying the rocket-pit with counter-radio neutraliser. The massive floor of the pit had been cracked by the blast and the searing flames, but that had been expected.

The blast walls, staggered at intervals around the pit, had stood up to their work well, although there were long cracks across their surfaces which told their own tale. Despite ear-plugs and several feet of concrete, the watchers in the shelter had been almost deafened by the roar of the departing rocket. Through the narrow grills of plexiglass they had seen nothing but a confusion of violet flame and dense choking smoke.

The noise had been localised by the pit and blast walls, so that little of it had penetrated to the watching million.

Lunt Palfrey was pleased. He had been biting his thin lips in those last minutes before ten o'clock, but now he allowed himself to relax. The Director so far unbent as to accept a cigarette from one of his assistants while waiting for the protection squad to signal that it was safe for everyone to leave the shelter.

The phone buzzed, and one of the research workers took the call. He turned to the Director.

"It's Knudsen calling from the stores. He wants to speak to you, sir. Sounds pretty excited about something."

Still wearing his benignant expression, Lunt Palfrey picked up the phone. . . .

In the rocket, only Lee Dury was conscious.

The six men and women of his crew lay motionless on their bunks while the pilot fought to assert his control over the rocket. Lee had known what to expect, but the others had been deliberately kept in the dark about the probable effects of the sudden shattering thrust as the rocket left the earth.

Despite all the cushioning, the rubber buffers and the pressurised cabin, that mighty force was bound to have some reaction on the human body. Everyone in the rocket, except Lee, had blacked out when, with a stupendous roar and a backwash of radio-active fire, the rocket had shot from its pit. Lee Dury had had a long and gruelling preparation for this ordeal, and his physique had been conditioned to withstand its effect. Very few people knew of the hours he had spent toughening himself up, so that his already athletic frame had become compound muscle and sinew.

Yet when it came, the take-off was worse, much worse, than anything he had visualised. There was a physical shock as his whole body was hurled against the rubber cushions, but less than nothing compared with the mental and psychological effects.

Lee felt his will-power draining away from him. He made a move to lift his hand to one of the controls, and he watched, with a weird air of detachment, as his fingers groped feebly towards the lever. It was like the aimless, unco-ordinated movements of a baby.

One corner of his brain kept urging him to do something. He couldn't quite remember, but there *was* something. It was urgent, too. God, what was it?

He fought to remember. All the time the longing to slump down and let go of everything threatened to submerge him.

The stabiliser vanes! That was it!

He must get the stabiliser vanes into position so that the rocket got on to an even keel. After that initial thrust, the rocket was steadily losing speed and would continue to do so, until the engineers came round and were able to boost the fission reaction. If he didn't get those vanes out soon, the rocket would start to arc back towards earth and one almighty crash.

There was the stabiliser lever. That long one with the ratchet handle. You had to remember to ease it back slowly, otherwise the rush of air past the rocket would tear the vanes clean away.

This time Lee's hand went out with rather more purpose. He seemed to be recovering his sense of timing. His fingers gripped the handle, tightened to release the ratchet, and then started to ease the lever back.

A movement flickered in the tail of his eye. Lee's rapidly-clearing brain registered the movement when it happened a second time. He turned his head and saw that Eb had got one hand to the strap across his chest and was trying to slip the buckle.

"Hold it!" said Lee. "I'll come over and set you free in a minute. How are you making out?"

"I ain't feeling exactly young and healthy. There's a whole school of green and pink spots dancing about inside

this helmet of mine. But that's nothing. We're flying, ain't we, skipper ? "

"We're flying, Ballast ! " chuckled Lee.

The lever was right back. The vanes were out, and there was a new sense of evenness in the rocket's flight. Lee grunted with relief. It was one thing to have tested the vanes in an artificial slip-stream in the lab ; it was another to know that they worked in practice.

He unfastened his own straps and then released Eb. The Ballast swung his feet to the floor and then put his hands to his helmet as a wave of nausea hit him. He weathered it, though, and was soon able to help in unbuckling the others.

Harry Keen was the next to come round, closely followed by Dolf Knight and Helen. Dolf took the controls, although there was little the pilot could do at this stage of the flight. Harry went back to the engine-room, leaving instructions that Bill Redding should follow him as soon as he came round.

It was Carol who first did the obvious thing. She looked through the long observation window in the direction from which they had come.

"Goodness ! " she exclaimed. "Those old globes you see around in classrooms are pretty accurate, aren't they ? "

Everyone laughed — and felt better. Carol's pleasantly screwy remark had snapped the tension. The others crowded round the window to see for themselves.

The earth hung in the sky behind like a vast, oversize sun. In places its surface was obscured by belts of cloud, but the outline of the continents and the oceans could be plainly seen. It was, as Carol had suggested, uncannily like the globe from which, as a kid, one had learned geography.

There was the huge mass of North and South America, and the mighty Pacific and Atlantic Oceans. There, on the fringes of the face presented to them, were the continents of Europe, Africa and Asia. It was a sight that no mortal eyes had ever seen, for they were already far above any altitude attained by strato-plane.

They stood watching silently for some time. Helen was

the first to turn away. She went back to her note-books and started making a careful record of her own and the others' physiological reactions to the take-off.

"Say, this is mighty dull, skipper," said Eb. "I expected a bit more excitement than this. And how long do we have to keep these durn space-suits on ?"

"You'll get all the excitement you need when we have to land back on the earth," said Lee. "As for the suits, we'd better keep 'em on until Harry and Bill have had a chance to check on the pressurising system. If it's okay, then we can take the suits off until we have to land."

"That'll be something," grunted the Ballast. "This off-the-peg number I'm wearing is getting tight under the armpits !"

In the engine-room, Harry Keen and his mate were working to increase the rate of the fission reaction. At least, Harry was working. Bill Redding had complained that he was still feeling queer.

"You took too much rye last night, Bill," said Harry. "Better sit down for a minute or two. Listen to this baby !"

His stubby capable hands edged a series of knurled knobs gently round, as his engineer's brain took in the message of a dozen different dials. In the heart of the unit, the pent-up force of nuclear fission was released to issue from the exhaust jets. Long tails of flame trailed behind the rocket as visible evidence of the power which drove it onwards and upwards through the vast tracks of space.

"Listen to this baby !"

That was the jesting, affectionate way in which an engineer referred to this latest amazing creation of man's inventive genius. Harry cocked his head to listen and looked to see whether Bill was listening, too.

Bill was rubbing the back of one hand with the fingers of the other. It was a nervous jerky movement, and Harry felt a momentary alarm. Was Bill going to prove to be yellow ?

Bill Redding yellow? *He* must be getting jittery himself !

But what had happened to Bill's right thumb-nail ? That nail an accident had ripped off, and which had never properly re-grown. The new nail was badly shaped, showed signs of having been gnawed at, but it wasn't twisted and warped. The fingers, too. They were thin and tobacco stained.

Bill Redding didn't use tobacco !

Keen rushed over and jerked back the other man's helmet. The white mask of K. Arthur Kimpie looked out through the small window . . .

"God, Harry Keen's gone mad ! We're sunk. I always wondered whether Harry wasn't perhaps a bit too old to make this flight !"

These were the thoughts that flashed through Lee Dury's mind a second later when he had dashed into the engine-room in response to the weird choking cry which had come from Keen's telecom. The pilot dragged Harry away from the figure at whose throat he had been clawing.

"Steady, Harry." The pilot's voice had a chilly edge to it. "You've no quarrel with Bill Redding, you know."

"No quarrel with Bill Redding," repeated Harry. "But this doesn't happen to be Bill Redding. It's Kimpie !"

"There, there !" soothed Lee, and then he did a "double-take" and saw the thin white face behind the glass visor. His horrified gasp brought the truth to the rest of the crew grouped in the doorway.

For a moment nobody spoke. Then the Ballast was heard to mutter, as if to himself : "The poor, dumb, crazy fool."

Lee Dury spoke to Harry.

"Everything okay in here ? "

"Why, yes, the unit's doing fine."

"What about the pressurising ? "

"That's okay, too, I guess. The gauge shows no sign of any loss."

"Right, then you can take off your space-suits, folks," said Lee. "Bring Kimpie into the cabin."

When Harry obeyed the last command, Kimpie looked

round at the assembled company with what was intended to be an air of ease. But his hands were trembling uncontrollably and he had to lick his lips before he could speak.

"Well, I came along, after all. They couldn't stop Arthur Kimpie from being on the first flight to the moon."

"Shut that up," cut in Lee. "We'll deal with you later. I'm more concerned with a better man than you. What's happened to Bill Redding?"

"There's nothing much the matter with him," answered Kimpie. "Just a crack over the head to lay him out, but I took good care not to hit too hard."

"Hit *too* hard — you!"

Harry Keen's voice was bitter. Kimpie reddened under the contempt and venom in the engineer's tones.

"I used a spanner," he said sullenly.

"You fixed the whole thing up in advance, of course," said Lee.

It wasn't a question, just a quiet statement of fact, but Kimpie seized the opportunity to do a little strutting.

"Yes, I worked the scheme out down to the last detail. I fixed that acid patch on Redding's suit, and I knew you would make him change it. I offered to take over duty in the stores which meant that I would have to fix Redding up with another suit. And I knew that these telecoms make one voice sound pretty well like another. As long as I avoided coming too close to any of you until after the actual take-off I couldn't possibly be caught out."

"Quite the little organiser," said Eb softly.

Kimpie looked round at the semi-circle of people facing him, hemming him in. Lee Dury looked grim, most of the others were plainly hostile, but Harry Keen was so angry that he could hardly trust himself to look at this vainglorious little ape who threatened to wreck all their plans. Keen turned to the pilot.

"When I think of it, Lee, it makes me mad — and I mean *mad*," he shouted, and his voice shook.

"Steady, Harry," warned Helen.

"I can't be steady when I think of this little runt plotting and scheming to do Bill Redding out of this flight. You folks don't know how much Bill wanted to be in this party, how he worked — by God, how he worked ! D'you realise that Bill and me pretty well built that dam fission unit back there. The days and nights of work . . ."

"We know, Harry, we know," cut in Lee quietly, as Keen's voice wobbled out of control for a moment. "The question now is — what do we do with Kimpie ?"

Eb Barnway spoke up.

"I'd better speak my piece first. Like at a court-martial where the junior officer says what he thinks and then all his seniors tell him what a dam fool he must be to talk like that."

There wasn't a smile, no relaxing of that air of hostility that shut Kimpie off from the other people in the rocket. The situation was gone beyond being redeemed by the Ballast's homespun humour. But he went on doggedly to give his individual point of view.

"Kimpie has done a terrible thing, a mighty mean thing, and sometime or other he's got to face punishment for it. But that is out of our hands."

"Why should it be ?" growled Keen. "We can shove him out through the escape hatch and nobody would be any the wiser. After all, who's to know that he ever came on the rocket but us ? I tell you, it's about what he deserves."

"I haven't known you very long, Harry," said the Ballast, "but I've known you long enough to realise that the man who's talking like this isn't you. Like you just said, you've been working day and night. You're kind of keyed-up — we all are, I guess. And the thought of your buddy, Bill . . ."

"Okay, that's enough alibis," rasped Harry. "So we don't throw this nut overboard. That's swell with me, so long as I'm not expected to speak to him. I guess I'll get back to my motor, skipper."

"Yeah," grunted Lee. He turned to Eb.

" You were saying something about Kimpie's punishment being out of our hands. Perhaps you'd like to go on from there."

" We've just got to suspend judgment on Kimpie until we get back to earth. That's the way it looks to me. After all, what punishment could we inflict even if we did take it on ourselves to judge his case ? "

" You mean, we should just ignore the fact that he has kept a good and useful man like Bill Redding from making this trip ? " asked Helen. " We should treat him like one of ourselves until we get back, and then hand him over to the police ? Is that your idea, Eb ? "

" That would be plain stupidity," said Carol warmly. " I tell you, this man Kimpie is a menace. In my job, I've met his type before — publicity-mad failures who'll go to any lengths to make the headlines. The kind of maniac who takes a dive off the tenth-floor coping after half the fire department have risked their necks to save his worthless life."

" What do you think we should do, then ? " asked Lee.

It was the first time he had considered Carol as anything more than a pretty, rather self-assured girl. She was a member of his team, now, with her own decided views.

" He ought to be kept under some kind of restraint," she urged. " The man is obviously mentally unstable, and it would be safer not to let him go free."

The subject of the discussion joined in. Kimpie had been listening almost apathetically to the talk until Carol had suggested that he was mentally unbalanced. He turned to her with that queer look of frozen fury in his green eyes. When he spoke his voice was calm.

" I am as sane as you, Miss Friar," he said. " I chose to go to considerable lengths to come on *M.C.R. One's* first flight to the moon, but many other people were prepared to do almost anything to join the trip. I am here, and my name will be among those who first saw the moon at close quarters. That is all I care about. What they do with me when we get back to earth is a trifling detail."

"That's enough talk, Kimpie!" Lee Dury rapped out the order in a voice that got through Kimpie's protective egotism. For an instant, fear looked out of Kimpie's eyes. What did this man Dury, with the cold, dead-pan expression, intend to do? Not . . . God, not that!

"You're a screwball, a crazy nut." The quietness of Lee's voice made the acid bite deeper. Kimpie squirmed as the pilot went on. "Even so, I suppose we can't throw you out into space. You're here and you'll have to come along, but nobody is obliged to fall on your neck."

The Nut — it was the name by which they were all thinking of Kimpie by this time — glared round at the rocket crew. He made a last appeal which might have been pathetic but for the undertone of bluster.

"Can't I help in some way? You surely aren't going to waste the services of a trained physicist. I could help . . ."

Lee's patience snapped. His fist gripped a bunched handful of Kimpie's jacket and shirt and he dragged the Nut towards him.

"Get this, and get it good. You aren't wanted on this trip. We've got all the physicists we need with Mrs. Pennant and Knight. Thanks to you, we're short of a fine engineer, and maybe we are going to need him badly before this trip is over. About all you can do is to keep out of the way."

He released Kimpie after fighting down the impulse to throw the screwball across the cabin. Kimpie walked over to the window and pretended to be looking at the earth, which had considerably dwindled in size by this time. The sun, markedly larger than it had seemed an hour before, hung in the sky on their left. Ahead loomed the moon, looking to the naked eye very much as it appeared in the earth's most powerful telescopes. The dark "seas" and the craters showed up clearly.

Kimpie saw nothing but a red haze. A haze in which a ring of hostile faces appeared fitfully. The face of Lee Dury, mastering his resentment by an exercise of will, the bitter angry face of Harry Keen, the contemptuous expression

of Dolf Knight, listening from the pilot's seat, and the cold disdain of the two women. All these faces intervened between Kimpie and the amazing view from the rocket's window.

Only one face revealed any emotion except hostility. That was Eb Barnway's. On the face of the man from the backwoods was something which could only be described as a kind of puzzled pity.

That fellow, that uneducated hick, to pity *him*, K. Arthur Kimpie!

He felt a tap on his shoulder, and turned to see the Ballast looking at him, still with that same expression. Eb made to speak, but Kimpie gave him no chance.

"You'd better leave me alone," he snarled. "You heard what Dury said, didn't you?"

"He didn't say anything about not speaking to you, as far as I can recall," said the Ballast mildly. "Look, son . . ."

"Go to hell!"

Kimpie flung Eb's hand aside. He walked over and flopped on to Bill Redding's bunk, lying with his face to the wall.

CHAPTER SIX

THE FIGHT

Lee was in the engine-room with Harry Keen.

Harry was calmer now, and busy writing up his log. The pilot waited until the last reading from the dials was recorded in the log before he spoke.

"How much difference does this make?" He jerked a thumb towards the living quarters. "How much are you going to miss Bill?"

Keen didn't reply immediately. He seemed to be mentally picking a path through a tangled jungle.

"See here, Lee, I was pretty mad out there just now, and maybe I said some things I wouldn't have said if I'd taken time to think. I've always disliked that little rat, and the sight of him in Bill's place made me sore. Now I can think a bit straighter, but it isn't easy to answer your questions, skipper."

"How so?"

"Well, if everything keeps on going the way it should, if this old fission unit keeps on pushing out the gas, we shall be okay. We can get along without Bill; in fact, you could get along without an engineer at all. But if things start going wrong . . ."

"We're going to need Bill, and need him bad. Is that the way it is?"

"That's about it. You see, skip, Bill has lived with this little bitch — Harry slapped the unit's gleaming casting — ever since she was a blue-print. He'd know if anything was going wrong with her before it happened."

"Well, we're doing fine up to now," grinned Lee. "If you strike any snags with the unit, there's always Dolf and me to lend a hand. Even the Ballast might turn a trick."

Harry shook his head slowly.

"You don't any of you know the first thing about it," he said. "This won't be a case of freeing a seized valve or clearing an oil-feed. If anything goes wrong with *this* motor, it'll be a big job and it'll have to be handled fast. I shan't have any time to be teaching any novices."

"Okay, sourpuss!" laughed Dury. "That lets me and the other guys out. I'll be keeping my fingers crossed for you, Harry."

When he went back into the cabin, Carol was busy preparing lunch. It was a strangely domestic scene. *M.C.R. One* was boring its way through space at thousands of miles an hour, while a woman went about the eternal job of preparing a meal for men.

Carol had put the table up and had laid a crisp white tablecloth. Eb was polishing tumblers and subjecting them to a severe scrutiny before putting them beside each place. There was something reassuring about the sight of the shining tableware and the crisp rolls.

"Looks good," nodded Lee. "What do we get to eat, Carol?"

It was "Carol" now. You couldn't "Miss Friar" a girl who was sharing the thrill and the tension of this miracle flight to the moon.

"You'll see when it's served," said Carol crisply.

Carol had liked this big amiable fellow well enough when she'd danced with him at the Flamingo, but since seeing how easily he had taken command of *M.C.R. One* and its crew, her liking had grown into admiration.

Eb polished away at an imaginary speck on a tumbler. "Right now them juices of mine is holding a convention," he said.

Carol clapped a hand over Eb's mouth. Lee strolled over to relieve Dolf at the pilot's seat.

"How's she going, Dolf?"

"Everything's dandy, Lee. Say, there's nothing to piloting one of these things, is there? It's going to get pretty boring after a while."

"I'll settle for a few hours of boredom so long as we don't have to bale out."

There was a terrifying metallic clangour which drowned the sound of the motor. The noise rose to a deafening volume which would have made speech impossible.

But they didn't talk. The two women had turned pale, and Eb had dropped the tumbler he had been polishing, only to catch it again with one of his sudden, deceptively swift movements. Harry Keen came in from the engine-room, his face asking a question.

Lee signed to everybody to stay put.

Even Kimpie came out of his sulky trance. He swung his legs off the bunk and looked round at the others. Nobody caught his eye. The Ballast was concentrated on his polishing.

Then the answer occurred to Kimpie. He perked up and slid off the bunk. Crossing to Lee, he tip-toed to reach the big fellow's ear.

"It's a meteor stream!" he yelled. "We figured that we'd run into several of these."

"I know what it is," mouthed Lee. "Be quiet! We want to listen to this."

Kimpie's spasm of self-importance collapsed. He shoved past Harry and went into the engine-room. By this time Helen and Carol were looking out of the window, but there was nothing to see.

With no atmosphere outside to render them incandescent, the meteors were invisible. The only sign of their presence was the sound of the titanic bombardment of the rocket's outer casing as *M.C.R.* One bored its way through the shower.

"We're beginning to come out."

Helen leaned over to speak into Carol's ear. The girl nodded gratefully. The uproar was diminishing. It rolled away and stopped quite suddenly, but it was some time before

their ears picked up the unfaltering hum of the motors once more.

"We made out, Harry, didn't we?" asked Lee.

The engineer had been examining gauges set at intervals in the wall. He looked soberly pleased.

"She's tough, this baby," he muttered. "That guy Roding certainly dreamt up something with that alloy of his. Them meteor things seem to have bounced off the rocket like spit off a hot stove."

"A crude but not inaccurate description of what probably happened," smiled Helen Pennant. "The force of impact would have caused the meteors to disintegrate like — er — "

"I don't reckon you'll improve on 'like spit off a hot stove,'" Lee grinned.

They all laughed together. A relieved laugh.

It had always been known that the chance of running into meteor showers or comets would rank as one of the greatest dangers attending interplanetary travel. Some scientists had thought that the problem of developing a fission unit small enough and sufficiently flexible to drive a rocket would be solved long before the difficulties of armouring the rocket against meteor collision had been overcome.

But the problem, as always, had produced the man. The Norwegian-Canadian — both countries claimed him — Kurt Roding had developed his alloy which combined lightness with unbelievable tensile strength.

M.C.R. One was made of Rodingite throughout. The prototype models had been subjected to a synthetic battering designed to reproduce the conditions set up when a meteor stream was encountered. The alloy had passed every test.

And yet there was bound to be a slight reservation in the minds of the rocket crew. Tests carried out on the earth, even though they might be supervised by the finest scientific and ballistic experts available, were still only tests. Out there in space was the only real answer to the question: "What happens when a rocket meets a meteor stream?"

Now they knew the answer. The rocket just kept on going.

"How's about that soup?" asked the Ballast wistfully. "It takes more than a meteor stream to stop my stomach juices working."

They all enjoyed that first meal in space. All, that is, except Kimpie. When Carol had gone into the engine-room to summon Harry, she had looked round for Kimpie.

"You want the Nut?" asked Harry. "He's in there."

He nodded towards a small compartment opening off the engine-room in which spare components were stored. Carol found the stowaway sitting on the floor with his back propped against an angle of the wall. Kimpie did not look up when she came in.

"Lunch is ready," Carol said. "Lee says you'd better come and get it before it's too late."

"I'm not hungry," growled Kimpie.

"It's crazy to take that attitude because we didn't fall on your neck when we . . ."

"*I'm not hungry!* Don't I make myself plain?"

Kimpie's voice flew up the scale. He scrambled to his feet, and for a moment it looked as if he might strike Carol.

"Shut that row, Kimpie!"

Harry Keen was in the doorway, his fists clenched and his lean face flushed with anger.

"You don't have to shout that way, particularly to a lady, Kimpie," rasped Harry. "Any more of that and I'll flatten that ugly pan of yours. It'll be a pleasure, believe me."

He signed to Carol to come away and he followed her into the cabin. Lee cocked an eyebrow, and Harry explained briefly that "the Nut" didn't feel like eating.

"It won't do him any harm to be left to stew in his own juice for a while," said Lee.

"I wouldn't be too sure about that, Lee," remarked Helen Pennant. "That little man has always struck me as being queer and unbalanced, and, frankly, I don't think it would take much to send him right off his rocker."

" You don't say, ma'm," said Eb, looking profoundly concerned. " I'll admit he's been acting a bit eccentric, but I put that down to the mental strain he's been enduring. Lots of other guys would have done the same if they'd had his chances."

" I think you'd find a good word to say for the old gentleman himself, Eb," smiled Helen.

The Ballast picked up a chicken bone and attacked it for a moment before answering.

" That little guy out there is feeling mean and ornery because — well, I guess he feels we're a crowd of pals together enjoying the experience of a lifetime, and he's on the outside looking in. It can be a pretty tough feeling."

Harry Keen couldn't stand it any longer. While Eb had been talking, Harry had been champing his chicken as though he was tearing the Ballast's arguments into shreds. He flung down his fork and rounded on the fat man.

" You're a mighty decent fellow, Eb. Trouble is, you're too decent. You don't know Kimpie like some of us know him. That guy is just mean and ornery because he was born that way! Don't waste your sympathies on him. Think of Bill Redding."

" Yeah, it sure was a tough break for Bill," agreed Eb. " See here, Lee, if you have no objections, I'll take a bit of chicken and some fixings out to Kimpie. Maybe he feels kind of bashful about joining us at the table."

Lee shrugged.

" As you please, Eb."

The Ballast filled a plate and loaded a tray. He slipped out of the cabin and the others went on with their meal, talking brightly as people do when somebody present has committed a social gaffe. Eb Barnway had not committed a gaffe, but his unassuming kindness to the queer outcast had the same effect on the company.

Eb was out of the room for some time. Everybody took good care not to listen to what was going on outside, and the sound of the fission unit drowned the sound of voices. But

when Eb came back five pairs of eyes turned to his tray.

Not a scrap of food had been touched!

In some irrational way, the others felt justified by the sight of the rejected offering. They would have been content to say nothing, but Eb wasn't the man to skirt tactfully round an awkward moment. He rubbed his chin and chuckled softly.

"That man is plenty sore," he muttered. "He was sore enough before I went out there, and I reckon I made things worse."

"How so?" asked Lee.

"Well, he doesn't want any truck with any of us, it seems, and particularly not with me. Kimpie thinks it's the all-time limit that an uneducated rube like Eb Barnway should take it on himself to try to do a kindness to *him*!"

Harry Keen passed Eb his coffee.

"Well, Eb, I'm not going to say it," grinned the engineer. "But right now I'm thinking it!"

Out in the little compartment, Kimpie was doing what passed with him for thinking. His thoughts ran round and round like trapped animals, and he grew more confusedly angry every minute.

The trouble was that Kimpie had deliberately refrained from thinking ahead while planning to stow away on *M.C.R. One*. Once or twice he had started to think of what might be the reaction of the rocket crew when his presence was discovered, but his mind had quickly shied away.

It would be all right. It would work out somehow. Pretty soon they would all realise that K. Arthur Kimpie was a pretty useful fellow to have along.

That had been the way Kimpie's mind had worked when he had allowed himself to contemplate the moment of his inevitable discovery. The fact that things had not worked out on these lines was just one more added disappointment in a long series of setbacks.

The rocket flight was being the biggest flop in Kimpie's life. At this moment he ought to be eating lunch with the

others. He ought to be sitting at that elegant table, looking out through the window on the approaching moon and the dwindling, queerly familiar globe from which they had come.

Damn them ! Damn Dury, with his high and mighty airs ! And as for that fat oaf, Barnway . . .

It was Harry Keen's boot which pushed Kimpie over the edge.

The engineer had come into the compartment for some graph paper. Twice he had curtly ordered Kimpie to move aside so that he could get at the cupboard, but the physicist was too sunk in the vengeful dream to hear. Harry put his boot into Kimpie's side.

"Why blast your eyes, let go ! Let go, or I'll kill you."

And Harry Keen meant it. He hit out at the hard bony head of Kimpie, who had lunged forward to sink his teeth in Harry's calf. It wasn't until Harry had taken a handful of Kimpie's thin hair and nearly dragged the Nut's scalp off that Kimpie let go.

"Get up !" roared Harry. "Get up on your feet, and I'll knock the living daylights out of you !"

He was mad with rage, but his madness was nothing to the blind insanity on Kimpie's white mask. The Nut leapt up with a suddenness that took Keen by surprise and sent him hurling backwards against the door. The door slammed shut, just as Lee Dury arrived, and for a moment the pilot could not force it open against the weight of the two struggling bodies.

Kimpie, oblivious of the engineer's crashing fists, was clutching at Keen's throat and, with wild, insensate strength, was beating the bigger man's head against the metal door. Lee slid in through the doorway when he and Eb had shoved it open far enough.

The pilot didn't wait to ask any questions. The edge of his open hand struck hard on the back of Kimpie's thin neck.

The grip on Harry's throat relaxed. Kimpie sagged to the ground, and for a moment the only sound was Keen's rasping breathing.

"What happened?"

Lee's voice was well under control. He was getting tired of this squabbling, and pretty soon somebody was going to find that out. Harry told his story and pulled up his trousers leg to show the ugly marks of Kimpie's teeth.

The Ballast whistled softly and went off to the medicine chest to fetch antiseptic. Lee glanced down at the slumped figure of the Nut.

"I wish you hadn't got yourself in a fight with the little runt, Harry," he said sharply. "This means we shall have to put Kimpie under restraint."

"Maybe I shouldn't have put my toe into him," growled Harry, "but I didn't kick him, Lee. It was just that he didn't seem to hear when I spoke to him. He just sat down there in the corner, mouthing to himself."

"Okay," nodded the pilot. "For the time being I guess we'll lock him in here. He won't be long coming round."

"Good job you came along when you did, skipper," said Harry, rubbing his neck. "I just hit and hit at the little devil, but it was like beating at a swarm of bees. He just held on."

"Better let Eb fix that bite," said Lee, pulling the door of the compartment closed and locking it on Kimpie. "We don't want our only engineer running round with hydrophobia."

The Ballast looked up from his ministrations with the cotton wool and antiseptic. He would do Kimpie's case more good by keeping quiet for the moment. He cleaned up the bite and bandaged it deftly.

"That's swell, Eb," said Harry. "Where are the girls, Lee?"

"They decided to go into the forward observation chamber," replied the pilot, "so they won't have heard anything of this rumpus."

Harry looked at his watch and then glanced at his row of gauges.

"Gee, this little spot of excitement made me forget that

we are about two hundred thousand miles away from the earth. Guess I'd like to come up forrad myself and take a look-see at the moon."

The two men went through the cabin and on into the observation chamber just below the nose of the rocket. Here they found Helen Pennant and Carol looking through the narrow slit window.

The moon had now grown so vast that it filled most of the sky ahead. They were near enough to see much of its surface in great relief, and the men listened as Helen pointed out the satellite's main features. The physicist named mountain ranges, the "seas" and some of the larger craters.

To the laymen the sight of the enormous sphere brought home for the first time the fact that the moon was another world. Here were mountains up to thirty thousand feet in height and vast craters hundreds of miles across. It was a dead, sterile world.

"It looks kind of bleak and cold," said Harry..

"The part you are looking at is probably fairly warm right now," said Helen, "but you are right about the moon being bleak. Even from here it's fairly apparent that the surface is devoid of any sign of life, and we shall get much closer than this."

Although she strove to appear calm, there was an under-current of excitement in Helen's voice. She had erected a small tripod telescope and now and again she would peer through it intently.

Eb came into the observation chamber. He apologised for causing a crush but said he felt he just had to see the moon at close quarters. The dead eerie world, the chaotic, contorted shapes of the lunar landscape, made the Ballast gasp.

"I've seen maps and imaginary drawings of the moon, but somehow I wasn't expecting anything so big," he said. "Guess I've got used to thinking of the moon as a useful little thing to have in the sky when you're out with the girl-friend."

Lee chuckled.

"We all feel the same way, Eb. Even Helen, who ought to be pretty hard-boiled about this kind of thing, even she's getting het-up. What's new, Helen?"

Mrs. Pennant looked up from the telescope with a smile. Her face was flushed, her usually well-groomed hair was disarrayed. Watching her, Carol had a momentary impression of the pretty girl who, nearly thirty years before, had elected to make a career in astro-physics.

"We are going to go close enough to solve at least one of the moon's mysteries," Helen said. "I'm sure we shall be able to see how the 'bright rays' from Tycho and Copernicus are formed."

"Tycho and Copernicus," repeated Eb. "Sounds like a swell title for a vaudeville act. Who are they anyway, and what are their bright rays?"

Helen pulled the Ballast to the window and pointed out two vast craters on the moon's surface.

"That's Tycho and that's Copernicus," she said.

"Gee, have even the craters got names?" breathed Eb. "Yeah, I can see the bright rays now, ma'am. Them kind of white streaks stretching away from the craters. But tell me one thing?"

"Yes?"

"Why are you scientists so keen on solving this mystery of the bright rays? What good do you reckon it's going to do anybody to know how them streaks got there?"

Helen grimaced at him.

"Look, Eb, we're getting wise to that 'dumb country cousin' act of yours," she said. "It's just your kind of leg-pulling, isn't it? You want me to launch out into a harangue about the scientist's unending search for the truth and all that kind of thing. And all the time you'll be listening to me getting myself worked up and laughing hard — inside. It won't work."

The Ballast shook his head sadly.

"Ain't nothing like a clever woman for spoiling a man's fun."

They all laughed together. The atmosphere in the little room, dominated as it was by the awe-inspiring vista of the moon, was friendly and homelike. This was how Lee had pictured the moon-flight, as a group of companions adventuring together. For a moment or two he was able to put out of his mind the unpleasant thought of K. Arthur Kimpie.

"Lee, for Pete's sake, come quick."

Dolf Knight's voice crackled over the inter-com.

"Hurry!" he yelled. "Something's mighty wrong here back in the engine-room."

CHAPTER SEVEN

TOUCH-DOWN ON THE MOON

Lee was already running back to the engine-room. The others followed.

They found Dolf looking transfixed at one of the fuel gauges. The needle was moving back perceptibly and it had travelled well past the half-way mark. Lee knew that the movement of the needle could not be detected under conditions of normal consumption.

"The gauge has gone wrong. That's it, isn't it?"

He looked at Harry Keen. The engineer had gone chalky white and he reeled as though he was going to faint. Lee grabbed his arm.

"What is it? What is it, Harry?"

His voice was urgent but calm. Keen made a great effort to pull himself together, but he still could not express himself clearly. He seized on a trifle.

"That gauge hasn't gone wrong. It was tested only yesterday. Bill Redding . . ."

"To hell with Bill for the present! What's happening to our hydrogen if the gauge is working properly?"

"Kimpie," croaked Keen. "I guess . . ."

But Lee had pushed him aside. The pilot unlocked the door of Kimpie's prison and pushed at it. It moved a fraction of an inch and then jammed.

"He's wedged it," grunted Lee. "Eb, give a hand here."

The Ballast charged forward to throw his weight against the door. He and Lee hurled themselves at the metal door until the top hinge broke and the door crashed inwards.

They jumped inside to find no Kimpie.

Harry Keen had recovered himself by now. He had fetched a torch, and he jumped over the smashed door and lifted it back into place.

"That manhole," he said pointing to a section of the floor which the fallen door had covered. "He's down there."

They prised up the cover.

"I'll go first," said Lee, "and take care of *him*. Harry, you forget everything else but getting to the stop-valve and shutting it."

"Watch that little devil, Lee," cried Harry. "He's as dangerous as a rattler."

But Lee Dury was in no danger from Kimpie. The pilot found him sprawled across the catwalk between the two main fuel tanks. Kimpie's eyes were closed, and his teeth were bared in a fiendish grin. In the moment of his mad revenge the Nut had passed out.

There was a drop of about ten feet off the catwalk on to the metal ribbing of the rocket's inner wall. If Kimpie were to fall off the catwalk it might easily be the end. It would solve a whole lot of problems, thought Lee. Or would it?

Lee felt a tap on his shoulder.

"I'll get him out of your way, Lee," said Eb, stooping to pick Kimpie up. "Oughtn't you to see how Harry is making out? He's getting some trouble with that valve."

Lee ran back along the catwalk and dropped down the ladder to join Harry. The engineer was sweating and grunting as he struggled to turn the wheel.

"The little swine has thought of everything," he puffed, glaring up at Lee. "He's even burred the thread of the screw with that spanner. I can't turn this damn thing."

"Let me."

Lee's great fists closed on the knurled rim of the wheel. With the tendons and muscles of his arms strained to cracking-point he started to turn. Slowly, painfully, the

wheel ground over the damaged thread until the valve was closed. Lee stood panting with the effort.

"God, that was wonderful," said Harry. "But I'm afraid it . . ."

"Save it until we've had a look at the gauges," advised the pilot. "Come on."

He put on a cheerful expression for the benefit of the women as he entered the engine-room. Both women saw through him, and both liked him the better for making the attempt. But Harry Keen's horrified face when he read the message of the fuel gauges told its own story of woe.

"It's bad, is it, Harry?" asked Lee.

"I'll say it's bad. I haven't had time to figure out *how* bad, but it's plenty bad."

"Right, then you'd better get figuring," ordered Lee. "The rest of you can scram while we work this thing out. Eb, take that crazy gink into the cabin and tie him up before he comes round. Dolf, take over the controls and gradually reduce power — don't rush it or we'll get fin flutter, and that *will* be the end. Carol and Helen, get forrad into the observation chamber, please."

"But aren't we going to be allowed to know what has happened?" asked Carol. "Surely, Lee, you aren't going to treat Helen and me as if we were hysterical schoolgirls."

Lee patted her shoulder.

"All I'm asking is a little time for Harry and me to calculate our fuel position," he said. "When *we* know how we stand, we'll tell you, never fear. Now, get back to those bright rays with Helen."

He smiled down at her, give her shoulder a squeeze and turned away to forget her entirely as he watched Harry taking readings and making calculations on his slide-rule. The engineer was past being rattled now, but there was something unsettling about his very calmness.

"Give me a check on these figures, Lee," he said, handing over the slide-rule.

Carefully the pilot worked through the series of computations. There was no error in Harry Keen's working.

"This means?" asked Lee.

"We've something less than four hours' supply of hydrogen left," said Harry. "That was a full tank that Kimpie opened up, and now it's practically empty."

"So we shall run out of fuel before we have got halfway back to earth. Then what?"

Harry shrugged.

"That's Helen's department, I guess. I suppose we go careering aimlessly through space until our oxygen supplies run out and then — finish."

Lee started to walk up and down the engine-room with short, rapid strides. Faced with this challenge, his mind worked smoothly, coolly.

"You've got a big safety margin in the construction of the fission unit, Harry. Could you rebuild her to get a much greater thrust from the same amount of fuel?"

"I could, given the time," said Keen, "but it couldn't be done in four hours, Lee, even if you could work on the unit while it was in motion."

"Ask Helen to come along here. By herself, for the moment."

Helen Pennant came quickly. She listened to Lee's news that they had only four hours' supply of hydrogen, and raised her eyebrows thoughtfully.

"From what I'd seen on the gauges, I guessed that would be about it," she said quietly. "What do you want with me, Lee?"

"I want some advice." Lee's voice was flat, toneless.

"I want you to pick me out the best spot on the moon's surface for the rocket to land on."

"You're nuts, Lee," gasped Harry Keen.

But Helen Pennant just smoothed her hair.

"I realised that would be our only hope," she murmured. "Carol and I have been discussing this very possibility. What's your idea, Lee?"

"Our one chance is to land and give Harry time to rebuild the fission unit."

"I see," murmured Helen, and she turned to Harry. "By stepping-up the fission rate, reducing tolerances and so forth, you hope to increase the unit's output, I suppose. How long is that going to take?"

"With Bill Redding along, I might have done it in a couple of days. Single-handed—begging your pardon, Lee—it'll take longer. I can't really say until I really get down to it."

"And what about our oxygen supplies?" asked Helen. Lee broke in.

"I've been doing a bit of figuring on that point. I reckon we have about five or six days' supply, maybe a little more. Once we have landed, we must cut off the main supply to the cabins. It'll be more economical to wear our space suits and recharge the cylinders from the main oxygen tanks. Is that agreed?"

"Yes," nodded Helen. "We shall need our space suits in any case. I mean, some of us won't be able to help with the fission unit, so they will be free to explore the moon's surface."

Lee grinned at the excitement in her voice.

"You aiming to solve some of those lunar mysteries, eh? I suppose you realise . . ."

". . . it's long odds against our ever getting off the moon?" said Helen. "For the moment, that doesn't seem important. It will do — later on. But right now all I want to do is to explore the moon."

Lee looked out of the side window. The vast dead world of the moon was very close to them now, only a few minutes' flying time away at the speed they were travelling.

"We'll tell the others what we are aiming to do," he said, "but I guess we'll keep quiet about the oxygen."

"That's right," agreed Harry. "No point in scaring anybody."

"Now about landing, Lee," said Helen briskly. "D'you

see that enormous crater, Tycho? Land somewhere midway between that and the southern mountain range. We shall hit the moon in early afternoon. That'll give us four — maybe five — earthly days of tolerable conditions."

"All that sounds screwy to me, but I'll take your word for it," grunted the pilot.

He rounded up the others, told them briefly what the loss of the hydrogen meant and explained the reasons for landing on the moon. Nobody said very much. It had all happened too quickly to register properly. Once they were safely (maybe that wasn't the word) landed on the moon, the full wonder of it would begin to soak in. For the moment throats were dry and hearts beat faster, as they strapped themselves to their bunks in readiness for the landing.

Eb fastened the unconscious Kimpie to one of the bunks and checked the buckles as though the Nut were his closest friend. Lee didn't pretend to aspire to such generosity of feeling. He carefully tested the fastenings of everybody but Kimpie; the Nut could take his chance and if he broke his neck it would be one problem the less.

Lee took the pilot's seat and carefully studied the screen above the control panel which showed the view ahead. He slowly began to depress a lever and, although the passengers were oblivious of the fact, the speed of the rocket started to decrease rapidly.

The thrust from the exhaust gases of the fission unit was being gradually deflected into tubes which led forwards and downwards. The mighty impulse from this nuclear fission was thus being used to counteract the gravitational pull of the moon.

Lee forgot everything about everything but the immediate task, that of landing *M.C.R. One* on the barren, boulder-strewn surface of the moon. He had landed prototype models of the rocket on every imaginable kind of surface, but this was the first time he had brought the full-scale rocket down.

Their speed was measurable now in hundreds, not

thousands of miles an hour. And it was still dwindling. Lee eased out the auxiliary stabilising vanes and he could feel the rocket steadyng itself.

The moon was rushing up towards them. The pilot pulled the rocket out of her dive and flattened out until he could see the stark skyline of the mountain range ahead of him. *M.C.R. One* dropped down nearer, nearer. . . .

She touched down, bounded, touched down again, bounded — not so high this time — came down once more and stayed down. Lee cut out the motor instantly, and he could hear the rocket's metal skids screaming across the dry rocky surface outside. The great rocket jolted and quivered to a stop.

Lee suddenly became conscious that he was nearly blinded by his own sweat. He had a crazy impulse to yell out, "We made it, by heck, we made it!" Then he remembered all the other problems.

When he went round to release his crew, Lee found them imbued with an irrational gaiety. They had all been thinking hard about this landing, and now Lee had made it. Great work, skipper, and to hell with tomorrow . . .

Lee made no move to release Kimpie. The Ballast unfastened the physicist's harness, and Kimpie opened his eyes. There was no violence, no wildness in them. He looked round mildly at the company, and gazed absent-mindedly out of the window.

"Where are we?"

His question was addressed to Lee, but the pilot did not answer. Eb put his hand on Kimpie's shoulder.

"We are on the moon," he whispered. "Lee just brought us down as smooth as silk."

Kimpie smiled. There was a suggestion of childish cunning in that smile.

"That was a pretty good idea," he chuckled. "When I let the hydrogen out of the tank, I didn't figure anybody would think of landing on the moon. But it won't do any good, you know."

"See here, you crazy screwball!" cried Harry Keen. "You've got us into one hell of a mess, but we're going to get out of it. You'll see."

"Leave him alone, Harry," growled Lee. "You're wasting your breath talking to Kimpie. Eb, we shall all of us be pretty busy these next few days and we shall all have our jobs to do. I'm going to give you one that I couldn't trust anybody else to do."

"I know," smiled the Ballast, "you want me to keep an eye on Kimpie. See he doesn't do himself or the rest of us any harm. Leave it to me."

He grinned a trifle sheepishly as he said this, but at the same time he gently tweaked one of Kimpie's bat-ears. It was the sort of gesture that might pass between a father and an erring son. Carol turned aside, surprised to find that her eyelids were pricking. A man didn't really have the right to be so *good* — a damned old-fashioned word, that, but she couldn't think of anything else — as Eb Barnway was.

Lee looked round for his second pilot.

"Dolf, there's going to be a bit of competition for your services. Helen will want you to help in her explorations, and there'll be times when Harry and I will want a hand with the unit. You're going to be busy."

"That's fine," said Dolf. "It would be pretty quiet about here with nothing to do, I guess."

"We'll all go out and see just *how* quiet it is in a minute," replied Lee. "I take it we shan't be able to work on the unit for some hours yet, Harry?"

The engineer nodded agreement.

"Helen, you're fixed up for the next few days with your exploring," Lee went on. "What about you, Carol? What d'you aim to do?"

"I'm going to try to get all this down on paper." She waved a hand round to embrace the rocket, the crew, the weird moonscape on the other side of the plexiglass. "I'm going to keep a journal. It could be good like — like . . ."

She stopped. She knew what she meant to say. Here

was an opportunity such as she'd often dreamed of, a chance to write, to create something enduring instead of juggling nimbly with words and slick phrases. Carol couldn't say all that, and she was afraid her sudden burst of enthusiasm might have embarrassed her friends.

"It'd *better* be good, honey."

Eb's mock-solemn threat brought them back to earth, or what passed for earth in this bleak nothingness of the moon. They laughed.

"We'll have to get into our space-suits and live in them while we are on the moon," Lee explained. "We shall recharge our cylinders from the main oxygen tank — that will make the oxygen last longer."

"Are we short of oxygen?" asked Carol.

Lee spoke without hesitation.

"We haven't any to waste, but as far as we can see we shall get through."

"Lack of oxygen isn't going to be our big worry," said Helen quietly. "We shall have to get away from this spot by nightfall or we shall be finished. You see, night on the moon brings nearly three hundred degrees of frost along with it."

"I can't get the unit rebuilt by nightfall," cried Harry. "That's utterly impossible."

"The lunar day lasts fourteen times as long as the earthly one," smiled Helen. "It's early afternoon hereabouts, which means we have up to five earthly days before the great cold starts to grab at us."

"What about the temperature now?" enquired Lee.

"Somewhere in the nineties," said the scientist. "It'll be pretty hot, although our suits will insulate us to some extent."

"Okay, then the first thing is a good square meal," ordered Lee. "For the next few days we are going to have to live on capsules, so we might as well make the most of our chances while we are still outside of our space suits."

Carol and Eb rustled up a picnic snack which everyone

but Kimpie tackled with relish. Kimpie was still docile and quiet, but he steadily refused all offers of food. When they had done, the crew put on their suits, and Kimpie let the Ballast dress him.

"Are we all set?" called Lee. "Right, Helen, lead the way."

"This is a pretty exciting moment," said Dolf.

"Ain't been so thrilled since the time I saw a strip-tease girl rehearsing for her show," said Eb.

So it was that the first group of human beings ever to step on the surface of the moon came with laughter on their lips. Laughter that boomed hollowly from their telecoms and added a final touch to the bizarre scene.

CHAPTER EIGHT

CLIMBING ON THE MOON

Once they had jumped down from the rocket, the crew with one accord stood still and looked round at the moon-scape. For the first time they could really see the kind of world into which they had come.

It was plain now that Lee had landed *M.C.R. One* in the centre of an enormous crater which must be many miles across. Round the rim of the crater, sheer walls of rock nearly a thousand feet high loomed upwards, and beyond these they could catch glimpses of fantastic peaks in the distant mountain ranges.

"The mountains of the moon!" This time Eb wasn't fooling. "Gee, I'd like to take a closer look at them. I've done a bit of rock-climbing in my time, and I sure would like to brag that I was the first man to lick them beauties over there."

"Over there" happens to be upwards of a thousand miles away," remarked Helen, "so you'll have to wait until your next trip, I'm afraid, Eb."

They walked around getting the feel of their suits. It was strangely like testing them out in the vacuum chamber way back at the Centre, and yet how different. There, they had had a smooth floor to walk on; here, the ground was covered with innumerable stones ranging from vast boulders down to splinters of rock. The stone was porous like pumice and was veined with streaks of red, orange and greenish-blue.

The predominant colour tone, however, was grey, a drab, featureless grey which gave way on the horizon to the stark

whiteness of the sky. The sun, brassily shining, beat down and the warmth of its rays struck back at them from the crater floor.

Lee scooped up a handful of the dust which lay between the rocks, and he threw it upwards. Instantly the particles settled to the ground, for there was no atmosphere to sustain them nor any wind to waft them along.

"It's like one imagined, only much more so," said Carol. "I knew the moon would be dead, but I never really pictured anything quite so dead as this."

"One gets the feeling that nothing has ever lived here and that nothing ever will," said Lee.

"Spooky sort of place," muttered Dolf Knight. "It's almost as though there was some presence here that resented our coming. I get a queer sort of sensation inside when I take a look round. Don't you feel anything, Eb?"

"I got a suspicion of heartburn," said the Ballast, "but I reckon I laid into them gherkins a mite too generously just now."

Lee joined in the laugh with all the others, but he looked at Dolf Knight carefully. It wasn't like his second pilot to start imagining things about strange "presences". This was just another development Lee would have to keep an eye on.

Helen was prowling around, turning over rocks and searching for the slightest sign of vegetation or life of any kind. There was nothing, no faintest sign of green, not even a fossilised form of leaf or sea-shell imprinted on the rocks.

"Tomorrow, or at least after we have slept, I should like to climb the crater rim and see what lies beyond," said Helen.

"Me and Kimpie will come along with you, ma'am, if we may," said Eb. "You'd like that, wouldn't you, Kimpie?"

"Yes," said Kimpie mildly.

His mental tumult had subsided now. He was content to let somebody else make his decisions and mark his course of action. Kimpie clung to the Ballast because none of the

others yet showed any sign of acknowledging his existence. None of them could forget that but for Kimpie's insane egotism, they would all now be well on their return journey to the earth.

Helen was not enthusiastic about her acceptance of Eb's offer. She would have been delighted to have Eb come along, but Kimpie might be troublesome. The Ballast, however, appeared not to notice her slight hesitation and he set himself to rouse Kimpie out of his apathy by talking to him about this exploration.

The two women went forward into the observation cabin to try to get some sleep. Helen, with the single-mindedness which Carol so much admired, found no difficulty in getting off to sleep, but Carol herself felt completely wide awake. After a time, she gave up the struggle. Her mind was churning; her thoughts growing chaotic and even frightening.

"This won't do," she murmured. "I'm going to be a dead loss if I don't get a grip on myself."

She sat up, found her notebook, and soon lost herself in the task of recording her first impressions of the moon. As she scribbled away, she refused even to contemplate the possibility that her notes might never be written up.

In the meantime Lee had been making his dispositions. Like a good captain he had studied his team so thoroughly that he could almost enter into their minds. The way he handled his crew during these next few critical days (for it was impossible to adjust one's thinking to lunar time) was going to be vitally important.

He had been confident that the majority of the travellers on the rocket were physically and psychologically sound, but this landing on the moon was a crisis and a test far beyond anything that had been in his mind when he had considered the hazards they might have to face together.

Lee ranged over his crew one by one. The women? Helen was rapt and her whole being was concentrated on the opportunity thus presented to her; she had become a precise scientific recording instrument rather than a human being.

Quite literally, Helen had no time to be afraid.

Carol? The kid was really an unknown quantity, and yet Lee felt certain that she would face up to the crisis however it developed. He took time off from his musing to ask himself whether that verdict on Carol was based on logic or on a more shifting foundation. He left his own question unanswered.

He turned to the men. Harry Keen was edgy, irritable and tense, but Lee knew that the engineer was only fretting to be allowed to get to work on the fission unit. Dolf, apart from that unexpected reference to an imagined hostile presence, seemed normal, but Lee was watching him.

The Ballast? It was strange, thought Lee, that the man he knew least about should give him least cause for anxiety. He was dead sure that, come what may, Eb would face it squarely, and probably with one of his own down-to-earth cracks. Lee felt his own strength of purpose reinforced by the solid faith and kindly humour of this hick from the long grass.

Lee's mind sheered away from Kimpie. He wasn't really a problem that could be dealt with now. He had to be kept out of mischief, and that was Eb's headache. Somebody else would have to decide Kimpie's fate when they returned to earth.

"Harry," said the pilot when he had finished this mental roll-call, "you're going to get some sleep."

"Like hell I am!" snapped Keen. "I've got a job of work to do."

"You have, and that's why you're sleeping first," said Lee. "Dolf and I can do the stripping-down of the unit almost as well as you, although we mightn't be as quick. But when it comes to adjusting the unit and altering the balance of the fission compounds, then you are the only guy here who knows the first thing about it. You'll have to work until you drop, if we are going to beat this big freeze that comes with nightfall on the moon."

"You're right," agreed the engineer, after a moment's

thought. "I'd feel better for a few hours' sleep, I guess. See, this is what you have to do."

Lee and his second pilot listened carefully to the rapid outline of the stripping-down process which Harry gave them. Then he went off to his bunk, with a promise that he would be called as soon as they had finished their part of the work.

Lee and Dolf worked till the sweat ran cold and clammy down their backbones. They didn't have much to say to each other, but there was a companionship in their labour which seemed to steady and support Dolf Knight. Lee was suddenly conscious of the sound, queerly distorted by the telecom, of Dolf humming to himself.

When they had been hard at it for hours, Carol came into the engine-room. They greeted her briefly but neither man asked her any questions. The girl went to the window and looked out on the dead, sunlit floor of the crater.

"I couldn't sleep, so I've been making some notes for my journal," she exclaimed.

"What about the others?" asked Lee.

"Helen is sound asleep, but I'll bet she wakes up at the exact moment she wants to start her day," said Carol. "She's marvellous. When I came through the main cabin, Harry and the Nut were sleeping. I thought the Ballast was, until he said 'Hullo, beautiful' as I went by. Of course, he could have been dreaming!"

The two men laughed. It occurred to Lee that Carol had the same streak of sane, humorous sweetness in her make-up as had the Ballast himself.

"Can I help?" asked the girl. "You fellows are just stripping the motor down before Harry gets to work on it, I suppose?"

"We can't have a woman burring these bolts," grunted Dolf, looking up from the job. "Harry would raise hell with us."

"Burring bolts, is it?" cried Carol. "See here, Dolf,

my old man kept a garage in Spokane. I was practically weaned on a spanner!"

Chuckling, Lee found her a spanner and watched her deftly setting to work with it. About the only part of her which he could see was her well-kept, capable hands. And that was plenty, for he had to force himself to get back with the job in hand.

What was eating him? It could be propinquity, of course, but he'd been near many girls in his time and none of them had affected him this way. It must be moon madness, he thought, and firmly shoved the subject down into his sub-conscious.

"That's as far as we can go," he said an hour later. "We'll get Harry to take on. Carol, you've been yawning good and proper this last ten minutes. I reckon you'll find you can sleep now."

"I think I shall," said the girl. "Good-night or good-morning, or whatever it is."

Harry and Lee talked over their plan of campaign.

"There isn't much the others can do for the time being," said the pilot. "I'm giving 'em the day off, but there will be work for everybody except Helen before long. Obviously, we have got to let Helen carry on with her own work."

"What have you got in mind, Lee?"

"Well, I want you to work on the unit, of course. When you have the actual fission component exposed, can you have it taken away from the rocket?"

"I was going to suggest that," said Harry. "It would be safer if I worked outside behind a wall of boulders."

"Dolf and I can build up a wall for you," said Lee, "although there isn't a great deal of point in it, Harry, because if you did slip up and let the old unit go off pop, we should all be stuck here like a dumb blonde with a flat tyre. I want the works of the unit removed for quite a different purpose."

"What's that?"

"We've landed on level ground. Somehow or other we have to raise the nose of the rocket so that we shall take off into the sky. Otherwise, we shall just hit the opposite wall of this crater."

"Ah!"

The engineer grunted with relish and stood considering this tricky little problem. Lee nudged him in the ribs.

"This is your department, Harry," he said, pointing to the half-stripped engine. "I'll figure out how we are going to take off."

Lee went out into the cabin to find Helen and her two companions preparing for their trek to the crater's rim. Dolf was taking a nap on his bunk, and Helen and Eb were talking together quietly. The physicist was carrying a knapsack for her specimens. For the moment, it held her notebooks and a hammer which she had borrowed from Harry Keen.

"Is there anything else we need?" Helen asked.

"I don't think so," replied the Ballast. "Kimpie's got the rope, you've got the knapsack and I'm bringing the lunch."

He unzipped the breast pocket of his suit and pulled out a phial of white tablets.

"That reminds me," said Lee, "I haven't had breakfast yet."

He took out his own phial, slid back the visor of his helmet and popped two of the tablets into his mouth. He pushed back the visor quickly to minimise oxygen loss and let the tablets dissolve slowly on his tongue.

"They are wonderful things, aren't they?" grunted Eb. "Full of vitamins, proteins and what-have-you. Much better for you than gammon rashers and poached eggs, of course."

"Shut up," everyone invited him, and Eb subsided, his shoulders gently shaking.

"We are off now, Lee," said Helen. "We should be back in five or six hours. You ought to be getting some sleep, didn't you?"

"Later on," said Lee vaguely. "I'm going to take a

look round first. Have a nice time, won't you ? "

" Yeah, we'll send you a postcard," promised Eb, jumping down from the hatch to the crater floor.

Lee watched them for some time. Their progress was slow, for they had to pick their way among the boulders and there seemed to be hardly a square foot of the surface which was not covered with stones which shifted and rocked as one stepped on them.

Before setting out, Helen had taken a thermometer reading outside the rocket. The temperature was now down in the mid-eighties, and the heat hardly troubled them in their space suits.

Eb seemed to be finding the going somewhat harder than the others, possibly because he had more superfluous flesh to carry. He lagged behind, but kept urging his companions not to wait for him.

" You can wait for me when you get to the crater wall," he said. " There'll be time for you to take a look round."

Kimpie was pleased to be going ahead with Helen. The numbness was going out of his brain, and ever since he had woken up he had been conscious of a lifting of his spirits. True, by emptying the fuel tank he had done a thing which even he could now see was crazy. But the results !

M.C.R. One had not only been the first rocket to fly round the moon, she had been the first to land on its barren surface. That was a feat which most scientists had said was ten to twenty years distant, but now, thanks to Kimpie, it had been done. Helen Pennant, stalking along silent and aloof, did not appear to realise what a debt she owed to the man at her side.

Kimpie, however, did not allow himself to be ruffled by this lack of recognition. He felt himself to be an instrument of fate, and that was a mighty consoling thought. His name would go down in history.

Helen suddenly stopped and bent down to examine some of the rocks on the crater floor. Kimpie heard her ejaculate quietly.

"What did you say?" he asked.

Helen pointed to the rocks with her hammer.

"This is positive proof that this crater was formed by meteor bombardment, and not by volcanic action."

"I don't quite follow."

For a moment Kimpie had dropped all pretence. His voice was humble. Helen started to explain, coldly at first but gradually warming to her theme. The Ballast caught up with them and stopped to listen, although he understood very little of her chain of reasoning.

Kimpie was in very little better case, but he made appropriate noises from time to time. Helen stopped, cracked off a small pinnacle of the rock and dropped it into her sack.

"D'you mean to say that this big hole," Eb gestured round at the crater, "was made by a meteor hitting the moon? That must have been some collision."

"It would make anything that ever happened on earth seem like a kid's pop-gun going off," said Helen.

The Ballast was thoughtful for a moment.

"That little ship of ours wouldn't stand much chance if we ran into one of them things."

"It isn't really a big risk," explained Helen. "These meteors hit the moon many millions of years ago, and in that time the astro-physical conditions in this part of the universe have changed considerably."

They pushed on again towards the crater wall. Their tongues were limbered up now and all three talked together freely. Kimpie even made his contributions.

Neither Helen nor Kimpie noticed that now the Ballast seemed to find no difficulty in keeping up with them. In fact, by the time they had laboured across the last stretch of rocky ground it was Kimpie who was beginning to feel distressed.

Now, one of the unexpected hazards of moon travel held them up for a time. They came into the shade of the cliff and instantly their limbs were gripped by freezing cold. Helen would have fallen but for Eb's helping hand. They struggled back the few yards which separated them from the sunshine,

and they felt the warmth seeping back.

"The heat of the sun isn't stored up in the rocks as it is in our world," explained Helen. "There is no atmosphere to act as a kind of blanket, so that the warmth dissipates itself almost as soon as the rocks pass into shade."

"I suppose that when night comes it will be like that, only more so," said Eb, and he shivered.

They made their way along to a point where a kind of headland jutted out into the sunshine. The cliffs here were well over eight hundred feet high, but they were not sheer. The walls were seamed and contorted into vast folds, and everywhere there were pinnacles and crags of rock to afford good hand- and foot-holds.

"I reckon we can get up over there easily enough," said Eb, after studying the cliff carefully. "See, we'll take that kind of chimney there, and work out on to the ledge above. That almost makes a path to the top."

"There's a nasty looking piece at the top," pointed out Helen.

"We'll meet that when we get there," answered Eb.
"Eh, Kimpie?"

There was something hollow in Kimpie's answering laugh, but it might have been the distorting effect of the telecom.

With Eb in the lead and Kimpie bringing up behind, they edged up the chimney. The Ballast, although he was so short and tubby, seemed to find no difficulty in inching his way up the cleft, but Kimpie was bathed in sweat by the time they came on to the ledge.

As Eb had suggested, this ledge provided something like a path to within about a hundred feet of the top. It was extremely narrow and in one place it petered out altogether. Here, they did a traverse with the Ballast leading and with the others roped to him.

When they came to the last stretch they found, as sometimes happens, that it was by no means as formidable as it had appeared from below. Eb and Helen went up fairly

easily, and the Ballast was surprised when he looked round to see Kimpie spreadeagled against the rock wall just above the ledge.

"What's the trouble?" Eb called out. "There's nothing to be scared about, Kimpie."

"I'm not scared." For the first time that morning the demoniac side of Kimpie's nature peeped out. "I'm just all in, physically exhausted. I never was much good at this kind of thing, damn it!"

Eb was concerned.

"The little guy is telling the truth, I guess," he whispered to Helen. "He ain't scared, but he's real mad at being beat by his arms and legs. He won't take kindly to being helped, either."

The solution came to Eb even as he spoke. He gave a guffaw of laughter and started to pay out the rope so that it soon dangled near Kimpie's head.

"Kimpie, slide off your metal soles, and tie 'em to the rope," Eb ordered. "Then see how you come up the cliff."

The effect of taking off the weighted soles was almost ludicrous. Kimpie practically floated up the last hundred feet of the cliff. Once he was up, Eb collapsed into helpless laughter and it was some time before he could explain the joke.

"Maybe it doesn't strike you as funny," he said, "but I can't help being tickled at the thought of our carrying all those pounds of extra weight up over the cliff. And it took a rube like me to think of it. You scientists don't go to see these moon films, that's pretty plain. They would teach you a thing or two."

And he slid off his own soles, and tried out a few skips and jumps which sent him bounding seven or eight feet off the ground. Helen followed suit, but she soon returned to the serious business.

They walked to the other side of the narrow ridge and saw the outer wall of the crater sloping away gently beneath them. From this height, and in the absence of atmosphere,

a dazzlingly clear panorama of valleys, plains and craters opened out before them. On the horizon stood the vast mountain range.

Eb announced his intention of staying put right there, but Helen wanted to climb down the outer wall and Kimpie went with her. The Ballast watched them making their way down to the place where one of the "bright rays" could be seen. This broad white streak travelled down over the crater wall and then traced its way over valley and plain to be lost in the confusion of buttes and ravines.

Helen and Kimpie bent over the white trail, and Eb saw them grubbing away like excited terriers. He yawned. Even a moonscape could become boring in time. He settled himself down comfortably and dozed off, and it was some time before he woke up to find Helen looking down at him.

"A great piece of work," she cried. "We can now prove conclusively that the bright rays are formed of calcined rock dust which sprayed out from the point of impact of the meteor on the moon's surface."

"A whole lot of people are going to feel easier in their minds when they know that, ma'am," chuckled the Ballast. "It looks like we ought to be getting back to the rocket."

With a little prospecting they found an easier way down the rock wall and their return to *M.C.R. One* was uneventful. They found Lee and Dolf clearing a space by removing boulders and large stones to form a rough kind of wall. Eb and Kimpie joined in this work, and Helen went into what was already being called the "study" to write up her notes on the researches into the cause of the bright rays.

Carol, who was already working in the observation chamber, gave Helen a preoccupied smile. From the engine room came the sound of Harry Keen's discordant whistling. Work was the panacea which made even being stranded on the moon seem tolerable.

CHAPTER NINE

"RUN FOR IT!"

"I reckon that ought to suit Harry," said Lee after a while. "As I told him, there really isn't much point in building a safety wall but I guess he'll feel more at home tinkering with that fission unit if he is shut off from the rest of us."

"In a way I envy Harry," said Eb. "He's going to be too busy even to think. I wish I could get that way."

"Me, too," seconded Dolf.

"You needn't worry about time hanging heavy on your hands," grunted Lee. "I'll fix that for you. First of all, we've got to help Harry bring the unit out of the rocket. I should think it ought to be ready to move now."

They went to check with the engineer and found, as Lee had suggested, that the lead-encased heart of the fission motor had been uncovered. With a struggle they lifted it out on to an improvised carrier made up of bunk-members, and they humped it round into the shelter of the safety wall.

"How are you feeling, Harry?" asked the pilot.

"As fresh as paint," replied Keen. "We made good time getting that old unit down — better than anything we did at the Centre. I've got me a hunch, Lee. We're going to make it! Now leave me alone with this baby — I'll hot her up!"

Harry's high spirits infected the others. They knew he wasn't given to frothy optimism, particularly where motors were concerned. If Harry could do his part — and he evidently believed he could — then the battle was more than half won.

Kimpie started to gasp as his oxygen ran out. Dolf, who had been put in charge of the oxygen stores, took Kimpie off to fix him up with another cylinder. Eb turned to Lee Dury.

"How are we making out, skipper? The odds have swung a bit in our favour in the last few hours, haven't they?"

"I'd say so. Dolf and I made a careful check of our oxygen while you were away. We have enough for our needs, so long as we use reasonable care. And you heard Harry just now. He's confident that he can boost up that motor of his."

"Then we ought to make it?"

Lee shrugged.

"I wouldn't want to kid you, Eb. You wouldn't thank me for doing that, I know. We've got a chance, no more. Time is against us."

"Yeah, Mrs. Pennant was telling me and Kimpie that she figured we had somewhere between thirty and fifty hours left before the temperature dropped dangerously low. Already it's noticeably cooler than when we first landed."

Lee looked up at the brassy sun. Its position in the sky hardly seemed to change from hour to hour, but it was perceptibly lower than it had been when *M.C.R. One* came down on the moon.

Eb went on:

"That Mrs. Pennant is a lady I really admire. Say, skipper, she doesn't seem to know the meaning of fear. Coming back just now she was telling us what nightfall on the moon really meant. 'Absolute cold', she called it. Death to everything living. It never seemed to occur to her that she might be heading for the ice-box herself. I could see Kimpie didn't care much for the prospect."

"That little runt scares easily," said Lee. His fury with Kimpie had exhausted itself.

"If anybody had been listening carefully while Mrs. Pennant was telling about the big freeze, they'd have heard

"my teeth chattering," said the Ballast. "What's all this work you've got for us, Lee?"

"It's just a little chore," chuckled the pilot. "We have to raise the nose of the rocket so that she will clear the crater wall when we take off."

The Ballast studied the problem for a moment.

"I don't see how we can possibly do that, but from the purr of satisfaction you're letting out, skipper, I reckon you do!"

"I'd sock you for that if you weren't cased up in that space suit," returned Lee.

"Ain't much you can do to a girl, either," said Eb.

He was looking towards the rocket where Carol had just appeared in the hatchway.

"You're a crude old goat in some ways," laughed the pilot. "She's a helluva nice girl, Lee," Eb said.

"I know."

Lee's tone shut the door firmly on further discussion of the subject. Inside his helmet the Ballast permitted himself a grin.

Kimpie and Dolf returned, and Lee turned briskly to the problem of raising the rocket. Somehow or another, the job had to be done and it had to be done manually, for the only source of mechanical power on the moon was the fission motor now rapidly being taken down behind the safety wall.

"We have a good length of high-grade steel cable aboard," Lee explained. "It was brought along in case we landed on the sea and needed to be taken in tow."

"We shall need to take everything movable out of the rocket, shan't we?" asked Eb.

"Yes, that's our first job," agreed Lee. "We have to reduce weight in every way possible."

Kimpie had been looking around, and he now started to speak with rising excitement in his voice.

"I can see how we might lift the rocket, using the steel cable. If we fastened one end of the cable round that boulder over there, the big one that looks like a petrified cactus, then

led the cable under the nose of the rocket, round this pinnacle of stone here and all pulled together we — ”

“ Okay, smart-alec ! ” broke in Dolf Knight harshly. “ You don’t think that Lee here hasn’t already figured that out for himself, do you ? ”

“ Take it easy, Dolf,” advised Eb. “ Kimpie was only trying to help things along.”

“ Trying to help, huh ? ” snapped Dolf. “ If it hadn’t been for this pin-head, we shouldn’t be in this goddam mess right now ! He’d better keep his . . . ”

“ Cut it out ! ” Lee broke in. He didn’t like the way Dolf’s voice was soaring up towards hysteria.

Kimpie was spluttering incoherencies while the Ballast kept trying to soothe him as one gentles a restive horse.

“ If everybody’s said their two cents’ worth, maybe I can take a turn,” said Lee. There was something in this lunar atmosphere — or lack of atmosphere — which seemed to fray the nerves, and it was up to him to set the others an example.

He outlined his scheme, which was very much the same as that suggested by Kimpie. When he had done, he looked round enquiringly. Surprisingly, only Eb had any comment to make.

“ It’s the only thing we can do, skipper, I agree. But I don’t see how five men and two women are going to be able to haul up the nose of the rocket even after we’ve lightened her.”

“ Well, we can only try it,” said Lee. “ I think we might do it, because we shall all be exerting about six or seven times as much force as we are capable of exerting on the earth.”

“ Hell, yes ! ” chuckled the Ballast. “ I plumb forgot that. And I was only joshing Mrs. Pennant a while back that she didn’t go to the films enough ! ”

Soon the whole party, with the exception of Harry Keen, was hard at work inside *M.C.R. One*.

Under Lee’s direction, the work went forward smoothly.

Everything movable was taken from the forward part of the rocket and shifted into the rearmost compartment where it would help to prevent the stern from shifting. When this compartment was filled, the remaining fittings and equipment were moved outside.

Lee had calculated as closely as he could how much weight they needed to jettison before he and his crew could hope to lift the rocket's nose. He did not want to risk a disappointment which might have unforeseen psychological effects on his party. He therefore erred on the side of safety and had his helpers remove bunks, partitioning and everything that could be dismantled.

The oxygen was stored in coupled cylinders in a storage chest amidships. The cylinders were massive and heavy, and Lee ordered Dolf and Eb to remove them from the chest. With the utmost care, the two men closed valves, uncoupled the cylinders and manhandled them outside. When they were stacked, Lee himself examined them to see that all the valves were properly closed.

Behind the rocket's stern they built a wall of boulders. This had the same purpose as the weight in the rear compartment — to keep the stern stationary as the nose was lifted.

It wasn't as easy as it sounded to bend the steel hawser round the cactus-like column of rock. The job had to be done with bare hands, and it took the combined strength of Eb and Lee to do the trick. The hawser was then passed under the rocket, which was actually resting on fragments of the pumice-type rock.

They took it round the other rock pinnacle, hauled in the slack and then, on Lee's instructions, laid it down. He supplied everyone with pieces of fabric torn from a spare space-suit.

"Wrap it round the cable where you intend to grip it," Lee said. "Hi, there, Harry!"

The engineer emerged from behind his wall.

"Leave that, and come and do a spot of real work for a change," cracked Lee.

Keen came over and took his place on the hawser. At a word from the pilot, they all took up the hawser, dug in their heels.

"Now!" yelled Lee, acting as anchor-man in this unusual tug-of-war.

They all responded by putting out their utmost effort. Even Kimpie threw himself wholeheartedly into the heave. The effect was almost monstrously farcical.

The steel hawser drew taut as though it were the elastic in a child's catapult. The nose of the great rocket lifted so rapidly that it bounced off the taut wire and came down with a resounding twang.

Next moment the rocket was back on the ground again, with the team, Lee included, collapsed in helpless laughter. They had all been steeling themselves for a mighty physical effort, and some of them had even been bracing themselves to face the fatal disappointment of seeing their efforts to raise the rocket fail.

"Let's hope all our other problems sort themselves out as easily as this one," cried Lee, picking himself up. "Okay, Harry, you can go back to that box of tricks of yours. We can manage this without you."

They lifted *M.C.R. One*, and while Lee and Eb held her in position with the hawser, the others packed stones under the rocket to form a crude ramp. When they had done, the rocket was facing up into the sky at an angle of about forty degrees. She would thus easily clear the crater wall when she took off.

"She looks good, don't she?" demanded Eb. "I've only one criticism, Lee. How the heck do we sleep at an angle like that. If you have no objection I aim to rig up my bunk outside, at least until Harry has finished work on that motor of his."

"Good idea," agreed Lee. "And it's also a good idea for everybody to get some sleep. When we have had a few

hours' rest, we can get all the stuff we've shifted put back into place. I think I'm going to order you all a sedative tablet."

"Just as you say, skipper," yawned the Ballast. "But for me, it'll be taking coals to Newcastle."

Nevertheless, Lee doled out tablets to everyone except Harry and saw that they were taken. Bunks were dragged out and laid on the ground. It was still so warm that sleep was possible without any covering except a space-suit, and before long Lee's crew were quietly slumbering.

He went off to have a word with Keen. Behind the wall he could hear Harry's whistling.

"Can I come round, Harry?" he called.

"Half a minute. You'd better put these on, just to be sure."

A pair of heavy-duty rubber gloves came sailing over the wall, and Lee dragged them on to protect his hands, the only exposed part of his body. In the past few years, knowledge of the control of radio-active emissions had greatly increased. It was unlikely that any harmful rays would escape from the fission unit, but, as Harry said, it was as well to be sure.

"Well?" said Lee, going round into the open-air workshop.

Harry didn't answer for a moment. He was concentrated on probing inside the leaden casing of the unit with a queer instrument of the tongs family. With a grunt of satisfaction, he made contact with the article he was seeking and drew out a section of metal tubing.

He looked up at Lee and his hand went mechanically up to his helmet. It was a fruitless gesture, for the sweat and his brow were inside the helmet. Harry's mood of optimism had ebbed a bit.

"I can do the job in the time, Lee, I'm pretty sure of that now."

"You don't sound so cheerful. Why so?"

"Since I made up my mind that it was going to be

possible to carry out the adaptation of the unit in the time allowed us, I've started wondering whether the hotting-up is going to have the desired results. I suppose I ought to have been thinking about that from the very first, but I have the sort of mind that can only tackle one problem at a time."

"Not a bad sort of mind to have in a jam like this, either," murmured Lee.

"We are going to subject this baby — Harry patted the lead box with a weirdly affectionate gesture — to something she was never designed to take. We stand a good chance of being blown to hell when we start her up."

"It's a choice of being possibly blown to hell when we take off or being certainly frozen to death if we stay here," said the pilot, "There's only one thing to do. How long before we shall be able to get the unit back into the rocket, Harry?"

"Eight to ten hours."

"It wouldn't be better if you took a short sleep?"

"I shan't sleep again until I hear this little bitch screaming her head off once more," said the engineer, turning back to his work. "Be seeing you, Lee."

The pilot strolled away. The rest of his crew were asleep on their bunks near the rocket. On the earth there would have seemed something vaguely indecent in the sight of men and women sleeping in that kind of disorganised huddle. Here it seemed perfectly natural.

It was the space-suits, of course, thought Lee. Somehow they seemed to iron out the differences of sex and reduce humanity to a rather drab neutrality.

Not entirely, though. Lee was remembering the sight of Carol's trim hands, the long slender fingers, the well-tended nails. This time he didn't force his mind to sheer away from the subject of this girl. Instead he took the thought of her for a walk. For the moment, there was nothing he could do in or about the rocket. He would take time to sort out his feelings about Carol Friar.

She was a pretty girl, with the sort of prettiness based

on character, good bone and good health that appealed to Lee. He'd met girls as pretty, he supposed, although he wasn't as sure about that as he would have been only three days ago.

Carol had guts and intelligence. She had a sense of humour and — as he had thought before — an inner core of sweetness and sanity like Eb Barnway. Funny that one should find oneself thinking of a stubby, slow-speaking rube like old Eb in connection with a girl like Carol. But so it was.

"Mind if I join you, Lee?"

He turned to find Carol beside him. His heart bounded in a way he hadn't known it could bound.

"What are you doing here? I gave you a tablet and saw you take it. You ought to be asleep by now."

"You saw me take the tablet into my mouth," laughed Carol, "but you didn't see me spit it out again. It's somewhere down inside my suit right now!"

"Mutiny, huh? What was wrong with the tablet, anyway?"

"I don't like taking sedatives, and I didn't feel like going to sleep just now," explained the girl. "It's a cussed streak I've got in me."

"I guess you can tag along now. But I shall have to consider clapping you in irons when we get back to the rocket."

Carol laughed as they set off together. The surface made proper walking impossible but they enjoyed their scramble and what more natural than that Lee should give Carol a helping hand? When they had covered about half-a-mile they came upon a kind of shallow bowl in the ground which made a perfect sun-trap.

"Let's sit here a while," said Lee.

They jumped down into the bowl, which was free of stones, and Carol leaned back against the sloping side. Lee lay on his stomach with his head propped up by one hand.

Save for the space suits, they might have been any of a thousand couples on any holiday beach.

"Why are you staring at me?" asked Carol, after a long silence.

"I was giving you a good mark for continuing to take care of your personal appearance," said Lee. "About all I can see of you is your mouth, but I notice you are still wearing lipstick. Pretty good for morale — for my morale, I mean."

"Look, Lee, you don't have to talk that way," Carol murmured. "Can't we take it as read?"

"No, by God, we can't," said Lee in an altered tone. He sat up and took Carol's hand again. "Listen, honey, I wasn't fooling just now. You *are* good for my morale. It makes me feel good just to have you around. I guess . . . I guess . . . Gee, Carol, I love you! Isn't that a queer thing?"

"What's queer about it, I should like to know?" asked Carol. "I love you, too, but I shouldn't insult you by saying there was anything queer about . . ."

She found herself being crushed to Lee's chest. They clung together silently for a long time, their hearts racing. In their grotesque suits, they made a strange spectacle.

Lee broke away and looked at Carol, or at as much of her as he could see through her visor. Almost shyly, she returned his gaze and she felt relief when he laughed suddenly.

"What's the joke? Do I have a smudge on my nose?"

"No," said the pilot, "I was just thinking of something Eb said earlier on. He said there wasn't much you could do to a girl in one of these space suits. Lot he knew about it! Take a deep breath, darling, and open up!"

It was an awkward kiss but they made it. Carol's lips were warm and sweet, a heady reminder that the impersonal space-suit hid a living woman. They sat quietly hand in hand for a while before Lee lifted Carol to her feet.

"I'd say it was pretty good odds that that was the first

kiss ever exchanged on the moon," he said reflectively.

"On the moon or in Central Park it would have felt just the same, Lee."

A thought hit Lee.

"You knew I'd fallen for you, didn't you? Was that why you spat out that tablet and came after me?"

"Why, you conceited . . ." began Carol.

"Was it, darling?"

Carol laughed tremulously.

"Well, a girl has to find out some way, hasn't she? And maybe there won't be much time left to us."

"Hooey! After what has just happened, I feel dead sure we are going to get off the moon and safely back to earth. We've got all the time there is, honey. Years and years of it — and we'll spend 'em all together, just think of it."

"I'm trying to, Lee, but I'm scared."

"Nothing is going wrong. Nothing can go wrong."

Carol's hand tensed on Lee's arm.

"What was that?"

They both knew what it was. It was the sound of Eb Barnway shouting for Lee at the top of his voice. And in the Ballast's usually placid tones, there were notes of urgency, fear.

Instantly, Lee was the "skipper" once more.

"Get back as quickly as you can, honey. I must run for it."

CHAPTER TEN

"OXYGEN GONE!"

Lee ran at incredible speed across the broken ground, bounding from rocks as they rolled from beneath his feet and picking his way instinctively through the maze of boulders. When he reached the rocket, it was to find Eb talking to Helen and Harry Keen. Dolf and Kimpie were still asleep under the influence of the sedative.

The engineer turned to meet Lee. Keen's figure was bowed, and his face, below the stubble of beard round his lips, was ashy-grey.

"We're ditched, skipper," he said. "Might as well throw in our hands."

"Get back to your work,"

The order was thrown at him curtly, almost disdainfully. Keen's fists clenched, and he took a step forward.

"I tell you we're through, Lee."

"And I tell you to get back to your work!"

"Why, goddam you for an obstinate, pig-headed son of a . . ."

Harry went off in a fury, but he went back to his work. And, as Lee had judged, he threw himself into his task with redoubled energy.

"Now, Eb, what's happened?" asked Lee.

"One of the oxygen cylinders has blown a valve, and the whole of the contents has been lost."

Lee didn't speak. He looked at Helen, and she nodded.

"But how could it?"

Lee knew the question was futile, but he had checked up

on those cylinders so carefully. It couldn't have happened ! He had a sudden crazy impulse to shout all the filthy blasphemies he had ever heard, but he fought it down.

He stooped to look at the cylinder and saw that the valve had been forced clean out of its seating by the pressure of escaping gas.

" How do you supposed it happened, Helen ? "

Carol had arrived on the scene, and Eb was quietly explaining the reasons for his summoning Lee.

" I'm afraid the cause of the trouble is too dreadfully simple," said Helen. " There must have been a fault in the seating of the valve which escaped notice on the earth. Here on the moon, there is no counterbalancing atmospheric pressure on the exterior of the valve, which means that the effective pressure of the oxygen inside the cylinder is greatly increased."

" And after a time it forced open the weak spot," said Lee. " What about the others ? "

" As far as I can see, they are all right," said Eb.

" How did you discover it ? " enquired the pilot.

Eb looked sheepish.

" I had a dream, skipper. Fist time that's happened to me for years, but it was mighty vivid while it lasted. I dreamed that our rocket up here on the moon was being attacked by Red Indians. We kept 'em off for a long time with our six-guns — don't ask me where we got *them* from — but in the end one of the red devils crawled through and laid his tomahawk into the top oxygen cylinder. Tore a great hole in it, too."

" Then what ? " said Lee.

" I woke up. I was uneasy, and I had to get up and take a look at those cylinders. When I saw that blown valve, I guess I lost my head for a moment. I shouted for you that loud I woke up Mrs. Pennant and brought Harry over at the run. Sorry about that, folks."

Lee clapped him on the shoulder.

" Forget it, Eb. I'm glad you did yell. Now, get some

wire — strands of the steel hawser will do — and wire on the valves of those other cylinders. It mightn't do much good, but it can't do any harm."

"Okay, skipper."

The Ballast hustled off, pleased to have something to do.

"Carol, honey, you'd better try to get some rest. There's nothing you can do to help right now," murmured Lee, and he turned to Mrs. Pennant. "Helen, come with me. I want your help in figuring out just what this means."

They went into the cabin and spent a long time calculating and checking each other's calculations. It was a grim picture which the figures revealed.

"As I see it, the position is this, Helen," said Lee. "If Harry can have the unit ready in, say, six hours, that will leave about ten hours' oxygen supply to cover reassembling the unit, starting up and returning to earth. Strictly between you and me, I don't think we have much chance."

"We can only do our best, as I know you will do," smiled the scientist. "We shall only take about five hours on the return journey at the increased speed Harry hopes to attain."

"That's so," nodded Lee. "Well, I don't think we should be justified in withholding the true facts from the others. I'd better tell them and get it over."

He called together Eb, Dolf, Kimpie and Carol and told them what the loss of the oxygen had meant in terms of time. Their already narrow margin had been whittled away to nothing.

Carol trembled slightly at the implication of Lee's announcement broke in on her, but she braced herself bravely and smiled at the man she loved. Kimpie sat down on a convenient boulder. He seemed to be taking the news calmly, until one saw that his greenish eyes were goggling glassily, as though at some prospect too horrible to contemplate. Dolf started pacing up and down with one hand clenched in the fist of the other.

"Stop that, Dolf ! You're expending useless energy and wasting oxygen ! "

Lee's calm voice met an echo in Eb Barnway.

"We aren't beaten yet, skipper, I reckon ?" said the Ballast.

"No, old timer, we're not beaten," said Lee, "but I'm not going to pretend to you. We're in a tough spot, and we may not get out. If anything, the odds are against our getting out — that's the cold truth."

"What d'you want us to do, Lee ?" asked Helen.

"We are going on with our original plans," said Lee. "We are going to get all this stuff back into the rocket and fixed up in its proper place while Harry works on the unit. The only difference is this. Everybody must move about slowly and work slowly — everything possible must be done to conserve oxygen."

They nodded understanding, even Kimpie.

"When you are not working, lie down and keep your oxygen valve closed as far as possible," Lee went on. "Now, get started on this work while I go and talk to Harry."

He found Harry still sore and he did not try to soothe him overmuch. He told the engineer the grim facts of the situation.

"Unless you can have the unit ready to move into the rocket within six hours, we're sunk, Harry. What d'you think ?"

"I can do it if I'm left alone," growled Keen.

"You'll be left alone," said Lee.

He went back to help with moving back the fittings and equipment. His crew were faithfully carrying out his instructions, moving about with the minimum of haste and the least expenditure of energy. Even Kimpie was playing his part, although how much that was due to himself and how much to Eb's guidance would have been hard to say.

Those hours of slow plodding work were partly torment, partly relief. When everything had been fixed into place, Helen asked if she could go back to her own work, and Lee

readily gave permission. He only wished that everyone in the rocket was as calmly unafraid, as intent on the job in hand, as this woman. Dolf Knight was plainly getting "jumpy", Kimpie was walking about in a trance and even the Ballast, so it seemed to Lee, was more silent and pre-occupied than he had ever been before.

"I think Dolf and I could be usefully employed getting things ready in the engine-room for reassembly of the unit," said Carol. "After all, we both worked on the dismantling and it would save time if we get all the components arranged in the correct order, see that bolts are available, and so forth."

"A good idea," nodded Lee. "Get going, both of you."

"What about us?" asked Eb, jerking his thumb to include Kimpie.

"There's nothing much you can do for the moment," said the skipper. "Just take things easy. I'll go and see how Harry is making out."

He went off, and Kimpie allowed the Ballast to persuade him into taking to his bunk. It was uncomfortable lying at such an angle, but Kimpie didn't seem to notice anything unusual. After that first goggling contemplation of imminent death, Kimpie's brain had swerved away. For the past two hours, he had been working like an automaton, following Eb's whispered orders.

Eb climbed on to the bunk opposite, turned back his oxygen valve to the minimum and lay there relaxed and motionless. He lay on his side so that he could keep an eye on Kimpie, but the Nut hardly stirred. Eb's gaze rested on a sheet of paper on the cabin floor. It appeared to be covered in pencilled figures, and he wondered idly what it could be, but he made no move to pick it up.

Time dribbled away. . . .

From the engine-room came the occasional clangour of metal on metal, and even more occasionally, the sound of voices. Once Eb heard Dolf's voice raised in petulant annoyance when he failed immediately to find something he was

looking for. The Ballast swung his feet down with the idea of going to help, but he heard Carol quietly telling Dolf where the missing component was to be found.

Lee came back. He was moving slowly, as he had ordered his crew to do, but his shoulders were squared and his chin was up.

"How's it doing?" asked Eb.

"Harry's worked a miracle, as far as I can see. He's still as mad as hell at me, and that's maybe why he's pulled the trick. Anyway, the unit will be ready to move before long. I'll let you know when we want a hand."

"I'll be glad to have something to do."

"You're not getting rattled, old-timer?"

"I feel pretty good," said Eb. "It's my innards that are getting cold feet."

Lee grinned, but he still felt doubtful. The answer sounded like the Ballast, but was it perhaps a bit forced? Queer, thought Lee, he'd have bet his boots that Eb wouldn't have cracked, however tough the situation. He must be losing his ability to judge men.

"Take it easy," he said again. "I'll see how our mechanics are making out."

Before long, he was back again with Carol and Dolf. They had done all they could in preparation for the reassembly job. Now they sat round on the sloping cabin floor, talking in desultory fashion.

Eb told one or two stories. Nobody laughed much. The talk petered out. . . . Lee's arm went round Carol's shoulders and he drew her closer. Nobody spoke. Eb watched the scrap of paper on the floor. What the hell were all those figures about, anyway?

"Come and get it!"

The traditional yell of cooks brought them up with a jerk. It was Harry shouting to announce the end of his hotting-up work. Dolf leapt up excitedly.

"Okay," said Lee quietly. "Slowly does it. You'd better come and give a hand, Eb."

"What about Kimpie?" said the Ballast.

"We can do without him," answered Lee. "Three of us moved the thing out of the rocket quite easily."

Eb looked down at Kimpie. There was no change in his vacant expression.

They found Harry Keen recovered somewhat from his grouch. He was understandably pleased at having done a well-nigh impossible job.

"Well, there she is, boys," said Harry, pointing to the lead box. "Nothing but Rodingite could possibly stand up to the stresses this baby will have to take now."

"Let's get her aboard," said Lee.

When the fission unit was back in the engine-room, Harry grunted approval of the neat, ordered lay-out of the other components. Lee turned to the Ballast.

"I'm afraid there's only room for four of us to work here, Eb. And in any case, somebody has to keep a watch on that Nut outside. He's quiet enough at the moment, but you never know when he's going to fly off the handle again."

"I'll see Kimpie doesn't cause any trouble," said Eb. "Poor devil!"

He went out into the cabin where Kimpie was still lying in exactly the same position. Eb picked up the sheet of paper, and looked at the figures. It was some kind of puzzle, and he'd always liked puzzles. He'd been reckoned to be right smart at figures, too, way back at school, although that was a hell of a long time ago, now.

It wasn't long before he recognised the calculations. They were Lee's and Helen's computations of the length of time the oxygen would last. He could see so far through the maze of figures, but after a time he got stuck. Eb went over and shook Kimpie by the shoulder.

"Get up, Kimpie, you don't look comfortable that way. I guess the skipper won't object if we went outside for a spell."

Kimpie got up meekly and followed Eb outside. They walked slowly away from the rocket until they found a spot

fairly free of stones. Eb noticed that the shadows thrown by the rocket and the larger boulders were growing longer.

"Take a look at this, Kimpie," said Eb, handing over the sheet of paper. "I guess it shows how long our oxygen supplies are likely to last out, but it beats me. I reckon a guy with your scientific training could soon pick the truth out of this."

Kimpie took the paper and looked at it. Gradually his eyes seemed to focus on it. Eb saw his lips starting to move as he checked over the calculations. His hands started to tremble violently.

"They've been fooling us," he croaked. "That bloody Dury fellow has been fooling us."

"Steady, Kimpie," soothed Eb. "Lee hasn't tried to fool anyone. He said the odds are against us getting out of this jam, and now you seem to have come to the same conclusion. Sure there's no possible slip-up in those figures?"

There was a flash of the old petty arrogance from Kimpie.

"I know all the details of oxygen consumption well enough. It was one of the jobs I worked on. There is nothing wrong with those figures."

The Ballast fell silent, but he kept his steady hand on Kimpie's arm. Kimpie was still trembling, and Eb could see that the Nut was biting hard at his lower lip.

"Well, Kimpie, maybe I ain't so good at this kind of sum, but there's one thing I've been able to figure out. I've been thinking hard about this for several hours."

"What d'you mean?"

"This is our chance, Kimpie, our big chance! You have always wanted to do something big, something great, haven't you, Kimpie? That's why you stowed away on the rocket — so that your name would go on the record. Don't you see that, right in front of us, is the opportunity you've always hoped for?"

Kimpie looked at him suspiciously. Eb went on, tightening his grip on Kimpie's arm and forcing the other man to

look at him in the eye.

"It's going to be so easy, Kimpie. All we have to do is to lie down here, shut off our oxygen and — go to sleep. Just like that."

"Go to sleep," repeated Kimpie softly. "And without us, the oxygen supply would be enough to see the others through. We'd be *heroes*, Eb."

"I don't know about heroes, Kimpie, but we could do it."

Kimpie was attracted by the prospect. Then he suddenly shied away.

"Why should it have to be us? Why not the Friar girl, or even Knight?"

"Dolf is the second pilot. He must go along in case anything happens to Lee. And Carol — hell, Kimpie, she and Dury are in love! They've got all their life to live, a home to make, a fine brood of kids to raise. . . . No, Kimpie, we're the useless ones, the dead weight in the rocket."

"Yeah," said Kimpie slowly, "I reckon I'm ballast just as much as you are."

His voice was level, his green eyes were serene. He looked at Eb and smiled.

"You'll do it, Kimpie? We'll do it together?"

Kimpie nodded.

"That's fine. Now, I've got a pencil stub here in my pocket, and I'll scribble a note on the back of this paper."

He wrote quickly and then signed to Kimpie to lie down. Eb lay beside the Nut and clasped his hand over Kimpie's.

"Goodbye, Kimpie. I knew you would do the right thing."

"Goodbye, Eb."

A burst of high-pitched laughter floated across from the rocket. Lee curtly ordered Dolf to shut up. . . .

It reminded Kimpie of a game he had played on the beach when he was a kid. You lay down with your eyes

closed against the sun and held your breath. Queer things happened behind your eyelids, weird colour patterns formed and broke up to form again. There came a drumming in your ears and a horrifying tightness across the chest if you held your breath long enough. . . .

Once he had passed out.

He opened his eyes. Why didn't he pass out now ? He was still breathing easily. When he looked down, he saw that his oxygen valve was eased slightly over.

He hadn't done that ! He hadn't done it !

The protestations hammered in his brain, while, at the same time, some inner core of chilly sanity told him that he had cracked up in the face of this final test.

" Eb ! " he cried urgently. " Eb ! "

There was no reply. The hand that lay down on his own was limp and relaxed. On Eb's face was an expression almost of pleased surprise.

" I could still do it," moaned Kimpie. " God, I could still do it."

His hand went to the valve, but he could not close it. Then his self-control gave way. He shook Eb's shoulders violently, and the Ballast's helmeted head flopped about helplessly.

" Goddam you to hell ! " frothed Kimpie.

He jumped up and kicked viciously at the body. Then he ran, sobbing, back to the rocket . . .

Lee came hurrying at the sound of Kimpie's urgent cries, the others behind him. A moment before, they had felt elation at the speed with which the unit was being reassembled. Now, here was the Nut trying to gasp out some bad news or other.

Lee jabbed his fist hard into Kimpie's biceps. It was the nearest he could get to a slap on the face, and it had the desired effect. The pain of the blow brought Kimpie out of his growing hysteria.

" It's Barnway," he said. " He's committed suicide.

I — I just found his body."

" You killed him, you mean," rapped Dolf Knight.
" I'll bet you killed him ! "

" Dolf," said Lee coldly, " the next time you butt in I'm going to hit you — and hit hard."

" I'm sorry, Lee," muttered the second pilot.

" Show us where you found Eb," Lee ordered Kimpie.

The Nut led them to the spot. Lee bent over the Ballast's body and looked up at the others. He shook his head.

" There's nothing we can do here. Harry, you and Dolf had better get back to the engine-room."

The two men turned away. Helen and Carol stayed near Lee.

" Old timer," said the pilot, looking sadly down at Eb's body. " I never thought you would run out on us."

" Run out on us ? " Carol's voice was indignant. " Don't you understand, Lee ? Eb did this to help us all, to give us the benefit of his share of the oxygen supplies."

" God, yes, of course," muttered Lee. " What a fool I am ! "

" Eb has something in his hand," said Helen softly. She retrieved the paper and handed it over to Lee.

" Goodbye and good luck to all of you from both of us," Lee read. " Don't forget to take our oxygen cylinders. I always knew that Kimpie would face up to the really big test, skipper."

There was a sudden silence while the implications of the note sank in.

" You made a pact with him, Kimpie. And you broke it ! "

Lee stepped towards Kimpie, his great fists clenched. The Nut cowered backwards.

" Lee ! "

Carol's cry stopped her lover in his tracks, his hands uncurled.

"I guess you're right," he said. "There's nothing we can do to Kimpie that would square accounts for this."

"Shall we bring Eb to the rocket?" asked Carol.

"I think not," said Helen quietly. "We will leave him here in the silence, the cleanness. That's the way he would have wanted it."

"You're right, Helen," said Carol.

"Get back to the rocket, you," said Lee to Kimpie.

The Nut trudged back to the rocket. He was again drained of emotion and feeling, and was once more back in his trance-like state. For the future, though, Lee did not propose to take the slightest chance with Kimpie.

"I'm going to tie that fellow up," he said, and then he looked down again at the body of the man they had called the Ballast.

"He was a good man to have around," he muttered.

"And if I know Eb, he wouldn't ask for any better epitaph than that," said Helen. "Go back to the rocket, Lee, and do what has to be done. Carol and I will follow you in a minute."

When Lee had gone, the two women knelt and straightened Eb's limbs. They folded his arms on his breast and piled a cairn of stones at his head and feet. Then they left him and walked back, quiet and dry-eyed, towards *M.C.R. One*.

"It seems suddenly colder, Helen," said Carol.

"The sun is dipping towards the mountains. It's been growing cooler during the past couple of hours, but I suppose we have all been too preoccupied to notice it before."

They met Lee in the cabin. Carol looked round enquiringly.

"Kimpie? I've tied him up and dumped him in the small store room," said Lee. "I can't make that guy out. He submitted to being trussed up without a struggle."

"He has spent himself out," said Carol. "What about the take off? Will he be all right?"

"I've pillow'd his head with latex cushions," growled

Lee. "He'll just have to take his chance."

Carol squeezed his hand.

"Helen," said Lee, "have you thought what difference it will mean to us not having — I mean, without . . ."

"Eb's sacrifice will turn a thin chance into a fairly good one, as far as I can see," said the scientist. "We ought just to make it."

Harry Keen came into the cabin. He was too excited to remember the adjuration to move about slowly.

"We're all set for a test, skipper. I'm going to run her for ten seconds and see if we all get blown sky-high!"

CHAPTER ELEVEN

THE PLUNGE

Lee found that his lips were dry. He ran his tongue round them, and nodded to Harry poised over the main control-switch of the fission unit.

"Okay, Harry, give her the works when I say 'over', and cut her out immediately you see my hand drop . . . Over!"

The switch went in. And a sound, an incredibly beautiful sound, reached the ears of the five people crowded into the engine-room. It was the humming of the fission unit. The noise started to increase rapidly in volume and intensity. A faint shuddering ran through the hull of *M.C.R. One*.

Lee's hand went down.

The switch went back. The music of the engine dwindled and died. Everyone looked at Harry Keen for the verdict.

"Not bad," said the engineer. "She's going to pack a hell of a punch, but I think the rocket can take it."

"Good," said Lee. "Then we've got to get away as fast as we can. Dolf, you'll be taking the controls for the take-off."

"Why, sure, Lee," said the second pilot, "I'd be proud. But what about you?"

"I shall be here in the engine-room with Harry," explained Lee. "There is no question of pre-setting engine controls as there was for our previous take-off, because the performance of the unit is now something of an unknown quantity."

"Yes, I've been worrying about that a bit," admitted Harry. "We want maximum boost to get us up off the moon, but then we shall want to cut back so that the pilot can set the stabilising vanes."

"That's why I'm staying in the engine-room," said Lee. "I've been trained to withstand black-outs, and I'm hoping that I shall be able to get to work on that control switch without delay. Tell me what you think the setting will be now, Harry."

Lee listened carefully to the engineer's explanation and then he went into the main cabin to go over with Dolf the take-off routine. The second pilot had lost his jumpriness, and Lee's only fear was that Dolf might be over-cocky.

"That's what you've got to keep firmly fixed in your mind," said Lee, as he strapped Dolf into the seat. "This lever here, the vane control. You have to ease it back slowly. Slowly, d'you understand? Hang on to that thought when you hear the unit begin to build up for the take-off."

"I won't let you down, Lee," said Dolf Knight.

Lee checked that the two women were safely strapped in their bunks, and then, against Harry's protestations, insisted that the engineer should be similarly fastened.

"You've been driving yourself hard for hours on end, Harry," Lee said. "You are bound to black out. But as soon as you come round, you'll be wanted in that engine-room. We are looking to you to nurse *M.C.R. One* home."

He took a last close-up view of the moonscape, and let his eye travel over the bleak grey rocks to the distant mountains, remote and unapproachable. His gaze moved on into the sky where the earth hung, with the familiar shape of its continents, faintly but clearly discernible.

He came back to another sight, less than a hundred yards away. The sight of a body in a space-suit neatly disposed, with a pile of stones at its head and feet.

"Goodbye, old timer," said Lee under his breath. "If we get home it will be because you gave us a break."

"Okay," he said aloud to Dolf. "I'm going in to strap

myself against one of the uprights in the engine-room. I shan't be long. When you hear the unit starting up, you can allow about twenty-five seconds before the exhaust seal breaks. Then we shall be off!"

He looked down at Carol. Her lips framed some words, and he smiled at her with infinite tenderness. Then he was gone, and the others could hear him moving about purposefully in the engine-room.

"It's up to you and me, Dolf, now," he called out. "Here we go!"

On the instant, the unit leapt into life. Its humming swelled into a drumming which set the whole rocket vibrating. Lying in her bunk, Carol could feel the greater pent-up force surging to free itself. How long was twenty-five seconds? It seemed to be . . .

She came round slowly, fitfully. She would get a sight of the cabin with Dolf slumped in the pilot's seat and then she would submerge again under a wave of nausea. But, at last, she fought back to consciousness.

They were flying!

That was the big thing. But was it? Where was Lee? Why had he not come out of the engine-room to set her free? She called his name but there was no reply.

Fear attacked her, but she fended it off. Perhaps she could get her fingers round that buckle. The straps cut deeply into her wrists but she worried the buckle free. She cast off the strap round her waist and soon unfastened the harness round her shoulders and feet.

She stepped down from her bunk and stood swaying dizzily. Helen and Harry Keen were coming round. She must help them, but first of all she must see what had happened to Lee.

She found him sprawled on the engine-room floor. He was out to the world, but the pulse in his wrist reassured her that the knock-out was only temporary. It was a mystery, for the straps which had fastened Lee to the upright had been unfastened. And when Carol looked at the control switch

she saw that Lee had eased it back to the setting Harry had suggested for their normal flying speed.

Whatever had hit him had done so after the take-off. Carol thought of Kimpie. She went into the store room but found the Nut still out. He was still securely tied, and his pulse, although irregular, was fairly strong.

When she went back to the engine-room, Lee was just struggling to sit up. He groaned slightly and made to rub the back of his head until his hand encountered the cold metal of his helmet.

"What happened, darling?" asked Carol, supporting him.

Lee started to laugh.

"I got knocked out by my own helmet, that's what. The take-off was pretty grim, but I just about held on to my senses long enough to ease back that switch. I did ease it back, didn't I?"

He turned round to look at the controls and grunted with satisfaction when he saw that the switch was round at the right setting.

"After that I went out for a time," Lee said. "Not long, as far as I could judge. When I came round, I unfastened the straps and started to come out to see how Dolf was doing. I could tell by the way the rocket was flying that he was getting the stabilisers out. Then — that's it, something jerked me off my feet. I went down and took a knock from my own helmet which put me out."

"That jerk which knocked you off your feet," said Carol. "I expect that was something Dolf did, for it looked to me that he had passed out over his controls."

Lee scrambled to his feet and went out to the aid of his second pilot. Dolf was moaning gently, and Lee saw that his left arm was lying at an awkward angle.

"He couldn't have kept that arm inside the strap," said Lee. "He put it up when he was flung forward at the take-off and it was broken against the edge of the panel. All the same, he held on long enough to get the stabiliser lever back.

He passed out and jerked the lever down the last couple of inches. That would have caused the jolt which threw me down, but there's no harm done. The vanes are out and we're flying!"

Dolf came round at the sound of those last words. He grinned weakly and waved his good arm. Lee unstrapped him and took him over to a bunk.

Harry Keen, freed by Carol, had climbed from his bunk like a man dogged by the mother and father of all hangovers, and was now groping his way into the engine-room. He had enough zip left to turn round in the doorway and echo Lee's words.

"We're flying. We're going home!"

Helen came round in typical Helen fashion, quickly, coolly and without fuss. She helped Carol tend Dolf's broken arm. They could not cut him out of his space suit, so the arm had to be splinted up as best they could. Although they were gentle, they hurt Dolf. Inside his helmet his face was greyish-white with pain, but he did not let out a murmur.

"I did all right, didn't I, Lee?" he asked when the operation was over. "Taking the rocket up, I mean?"

"You did fine," grinned the skipper. "Nobody could have done better. Now, you try to get some sleep."

Dolf accepted a sedative tablet, and was soon asleep. Carol stayed beside him to see that he did not roll over on his injured arm.

Helen and Lee went to the window to look at the receding moon. The whole vast sphere lay behind them, and with Helen's help Lee picked out the shadowy circle of the crater in which he had landed *M.C.R. One*.

The scientist and the pilot stood side by side. This dead white world had been a challenge to both of them, and in their own ways they had each faced up to the challenge. Helen was going back to the earth with precious additions to make to the sum-total of human knowledge. Lee Dury was carrying back a different kind of testimony — the assurance

that the human spirit can triumph over all the raw deals of destiny.

Their experiences — if they reached earth and were able to tell their story — would bring much nearer the time when a properly planned landing on the moon could be carried out. Maybe they would both come again, for the moon still held her mysterious allure. There were still innumerable questions whose answers would be found only among the craters and the rocky deserts of the moon. There were the lunar Alps to be scaled.

Helen must have been thinking along these lines.

"We were the first people to land on the moon, but we have still not looked upon that hemisphere which she keeps always turned away from the earth," she said. "I wonder who will be the first to explore that unknown face."

"It could be us, Helen," grinned Lee. "I guess I'd have to get my wife's permission first, but I don't think that would be impossible!"

He laughed as Carol turned her head sharply. It was the first time either of them had acknowledged in words what everyone in *M.C.R. One* had already accepted.

"Bless you both," smiled Helen. "I only ask that you may be as happy as we were."

She was silent for a moment, thinking of her dead husband, and then her robust common sense took over to avert the slightest threat of mawkishness. "We are all doing a fair bit of chicken-counting talking about our next trip! Let's get home from this one, first!"

"Come and check up on the oxygen reserve with me," said Lee.

That did not take long for they were now on the last of the main cylinders. Helen took a reading from the gauge and did some mental arithmetic. Then she asked Harry to convert the reading on his thrust counter into miles an hour. After more figuring, she made a balancing motion with her hands.

"It's still touch and go. What I suggest, Lee, is that we

charge everyone's personal cylinder to capacity. I think there is about enough to do that. Then we shall know that we can last about three hours."

"That's a good idea," agreed the pilot. "Then we all start equal."

"Anything over must go into spare cylinders for you and Harry," said Helen. "No arguments, Lee, for obviously you are the two who will require to expend most energy. The rest of us can take to our bunks."

"Let's see how it works out," said Lee.

They charged their own cylinders first. It was noticeable that Harry's and Lee's required far more filling than Helen's. Then the two men toted the large cylinder into the cabin, and "topped-up" Carol and the sleeping Dolf.

Lastly, at Carol's insistence, they did the same for Kimpie. He was conscious now, but, apart from a swift glance when they came into the store room, he did not seem to be aware of their presence or to understand what they were doing.

"I've been thinking, Lee," muttered Harry when they left the store room. "About Kimpie, I mean. D'you reckon a guy like him can be blamed for acting the way he does? My mind keeps going round in circles when I start trying to figure that out. What d'you think?"

"Whole libraries of books have been written and men have spent their lives trying to answer just that question," answered Lee. "I pass!"

Harry's thoughts came back to something he could understand. His eyes ranged along the dials on his panel, and his lips pursed thoughtfully.

"Spill it!" invited Lee. "What's eating you? The unit sounds good to me."

It was true. Now that they were flying through space, the stress of the increased power thrust could not be felt. The only signs of their greater speed were the higher pitch of the hum and the wavering needle of the thrust counter which hovered around the maximum reading of the scale.

"She's lapping up a trifle more fuel than I like to see," said Harry. "Ask Helen to come here. She's the only person who knows how far this trip is."

Helen came with same calm cheerfulness. She checked carefully on the date by earthly reckoning and then went to work with Harry's own slide-rule. In the end she put the rule aside.

"We shall have to work this out ourselves," she said. "The margin is so narrow that I can't trust a slide-rule reading." ^b

They watched her as she worked, and both leaned over to verify her mathematics. When the result came up, they looked at each other and shrugged.

It was going to be a race which gave out first — their oxygen or the liquid hydrogen, the fuel for the fission unit! And such was the vastness of the figures involved, so nebulous was their knowledge of the rocket's real speed with the adapted unit, that they could arrive at no precise answer.

They might reach the earth or they might whirl away to meet death out in the cold emptiness of space. Either way, it was out of their hands now. They had done all that men and women could do.

Lee went to take over the pilot's seat, although it was more a gesture than a necessity. The others lay on their bunks, except for Harry who sat in the doorway between the cabin and engine-room.

It was Carol who started to talk. Anything to break the tautness of the silence which was building up. She spoke quietly of her childhood days, went on to talk about working her way through college, and described the day she had landed her first job.

Helen took over and told the story of an expedition she and her archaeologist husband had made to the headwaters of the Amazon. Dolf woke up and listened as intently as the rest. Now and then, Harry would get up quietly and go to his panel, but he always came back to listen to the slow soothing talk.

Dolf made a strange contribution. He told a story of his past of which Lee, who had known him well, had never heard. He described his experience as a young submarine commander whose craft was disabled by enemy depth-charges. He talked about the slow hours that passed before rescue came at last.

It ought to have been a disquieting story in the circumstances, but somehow it wasn't. Lee found himself understanding how Dolf's nerves must have reacted to the landing on the moon. No wonder he had been a bit jittery, but he was through that bad patch now.

Lee looked through the window, and clenched his fists to prevent himself crying out in elation. They were going to make it, after all! Through the tattered cloud barrier, the mighty ball of the earth loomed, vast and comfortably reassuring. There were the continents, the dark familiar oceans.

They had come through. A bunch of twentieth-century men and women had turned their backs on fear and, like their primeval forebears, had told each other stories to while away the slow time of waiting.

He turned away to listen to the laconic ending to Dolf's tale. There was a murmur of approval, and then Carol told Harry it was his turn.

"Me?" said the engineer. "Nothing of any account ever happened to me!"

And, in that moment, the humming of the unit ceased as suddenly as if it had been switched off by an unseen hand. The fuel had run out!

"Stay where you are, everybody," ordered Lee. "Except you, Harry. Check on the fuel!"

"The tank's dry," the engineer reported after a brief inspection.

"We're not done yet," cried Lee. "I feel certain we are within range of the earth's gravitational pull. What d'you think, Helen?"

"I believe you are right, Lee."

Within a few minutes it became clear that he was right, and their spirits rose. Lee explained that he would have to land on the surface of the sea, for without the unit there was no means of arresting his speed. All the time the earth was rushing towards them and their field of vision was narrowing down. *M.C.R. One* was heading down towards the North Atlantic, towards an earth which had been mourning its crew as lost.

"You'd better free Kimpie and bring him out here," said Lee.

Harry Keen obeyed this order. Kimpie came docilely and joined the others as they watched the approaching earth, but he did not register what was happening. Helen insisted on transferring the last of the oxygen into the cylinders of Lee and Harry.

The earth was close enough now for them to see mountain ranges, lakes and other features. The friction of the atmosphere on the rocket's hull was slowing her down, but it was still going to be a crash landing. Lee ordered the other five into the small space from which the hatch opened.

He eased down the rear stabilisers to level out their flight. They were roaring along above the sea gradually — so gradually — coming down nearer and nearer to the water . . .

Then they hit — and were under !

The jolt of the impact was not as severe as the take-off had been, but it was bad enough. In the small compartment, the crew were thrown about and Dolf yelped with pain from his arm. Lee rushed to join them.

They were under the surface of the sea. He had no means of telling how far but he did not think *M.C.R. One* was down very deep — yet. But even the miraculous strength of Rodingite could not withstand that mighty impact, that incredibly violent change of temperature. Plates were beginning to buckle and in one place a thin jet of water was spraying through a seam.

"Turn your oxygen full on to inflate your suits," ordered

Lee. "Harry, give Dolf a hand. I'll take Carol and Helen. Open that hatch!"

When the catch was slipped, the heavy door swung in and the green sea engulfed them. Lee pushed Harry and Dolf out ahead of him and saw the two men swirl upwards tightly clasped together. He clutched Carol and Helen to him and pushed out. For a moment he wondered about Kimpie, and then he became aware that the greenness about them was growing lighter . . .

All America, all the world had gaped at the news that something — something that looked like the lost *M.C.R. One* — had streaked up the east coast of America at incredible speed to vanish finally below the waves in columns of steam. Seaplanes and vessels of all kinds had turned towards the spot. It was a submarine chaser on patrol which picked them up.

The chaser's captain came into the ward-room where Lee was sitting with Carol and Helen. He reported that Dolf's arm had been properly set and that Harry Keen was recovering from his exhaustion.

"That chap Kimpie, the stowaway, is dead right enough," said the young lieutenant. "To judge by his face, he died of fright. But what about the other man — Eb Barnway, wasn't it? The man the tabloids called the Ballast."

"That's a story we are going to be proud to tell the world," said Carol. "But for Eb, we shouldn't be here."

"I'll be looking forward to hearing the story, Miss Friar," said the officer politely. "But we are nearing New York harbour, and I guess you folks had better brace yourselves for another ordeal. Manhattan is planning to give you the welcome home of the century!"

THE END

books

FICTION

THE BIG EYE is a classic American SF novel by *Max Ehrlich*, published in Britain by T. V. Boardman at 7/-. Set in the 1960's, the story deals with an epoch-making discovery made with the 200" telescope at Mt. Palomar — the last epoch, apparently, for an extra-systematic planet is about to collide with Earth !

A fine tale, with mounting tension, good science and a delightful end-twist.



THE OTHER SIDE OF THE SUN, written by Suffolk-born *Paul Capon*, published by Heinemann at 10/6, is a slow, smooth story of a world on the opposite side of Earth's orbit.

The science is not very imaginative, but it is accurate and interesting. The only thing we don't like is the coincidental nature of parts of the plot.

Even so, the book is worth reading for its description of the humanoids on Antigeos.

NON-FICTION

PHYSICS OF THE SUN AND STARS will tell you all an amateur will want to know about this subject. Author *Professor W. H. McCrea* has made a valuable addition to Hutchinson's University Library,

and at 7/6, the book is cheap.

Even if solar and stellar physics do not draw you, the early chapters on energy and the structure of matter will clear up a lot of your problems.



INTERPLANETARY FLIGHT is an ethical necessity for anyone who reads SFF. Few people in Britain could better qualify to write it than *A. C. Clarke*, who is Assistant Secretary of the British Interplanetary Society and an accomplished SF writer.

Published by Temple Press at 8/6, this book covers the whole field in simple, concise language that makes everything easily understandable. There is a mathematical appendix for those who like to play with figures.

Buy it, borrow it, beg it, or... well, get it anyway.



ROCKETS AND JETS, by *Bernard Way and Noel Green*, is extraordinary value. Wells Gardner, Darton & Co., have turned out a 176-page, well-illustrated tome of information for the incredibly small price of 5/-. There is not an aspect of rocket and jet construction that isn't dealt with — and explained by technical drawings.

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